HAZARD RANKING SYSTEM (HRS) DOCUMENTATION RECORD - REVIEW COVER SHEET

Name of Site: Old ESCO Manufacturing

Contact Persons

Site Investigation: Brenda Nixon Cook, NPL Coordinator, EPA Reg.6 (214) 665-7436

(Name) (Telephone)

Documentation Record: Brenda Nixon Cook, NPL Coordinator, EPA Reg.6 (214) 665-7436

(Name) (Telephone)

Pathways, Components, or Threats Not Scored

Surface Water Pathway: The surface water pathway has not been scored because an observed release to the surface water migration pathway has not been documented and there is no overland flow segment for this site. Based on available information, evaluation of the surface water pathway would not significantly affect the overall site score (Ref. 1, Sec. 2.2.3).

- 2) Ground Water Pathway: The ground water migration pathway has not been scored because an observed release to the ground water migration pathway has not been documented and there are no analytical data to support a release. Based on available information, evaluation of the ground water migration pathway would not significantly affect the overall site score (Ref. 1, Sec. 2.2.3).
- Air Pathway: The air migration pathway has not been scored because an observed release to the air migration pathway has not been documented and there are no analytical data to support a release. Based on available information, evaluation of the air migration pathway would not significantly affect the overall site score (Ref. 1, Sec. 2.2.3).

HRS DOCUMENTATION RECORD

Name of Site: Old ESCO Manufacturing

Site Spill Identifier No.: 06TW

CERCLIS Site ID No.: TXD980513808

EPA Region: 6

Date Prepared: March 2008

Address, County, and State: 500 Forrester Street, Greenville, Hunt County, Texas, 75401*

General Location

within the State: The facility is located in the City of Greenville, Hunt County, Texas.

Greenville is located in northern Texas (Ref. 3, p. 1).

Topographic Map(s): The following U.S. Geological Survey (USGS) 7.5-minute topographic

series map was used in locating the facility: Greenville Northeast, Texas

(1963) (Ref. 3, p. 1).

Latitude: 33.1383 North

Longitude: 96.0755 West

Latitude and Longitude coordinates were measured from the approximate center of the former main facility building and were determined using a scaled aerial photograph (Ref. 3, p. 1; Ref. 4, p. 1)

Scores

Air Pathway Not Scored
Ground Water Pathway Not Scored
Soil Exposure Pathway 81.62
Surface Water Pathway Not Scored

HRS SITE SCORE 40.81

^{*}The street address, coordinates, and contaminant locations presented in this HRS documentation record identify the general area the site is located. They represent one or more locations EPA considers to be part of the site based on the screening information EPA used to evaluate the site for NPL listing. EPA lists national priorities among the known "releases or threatened releases" of hazardous substances; thus, the focus is on the release, not precisely delineated boundaries. A site is defined as where a hazardous substance has been "deposited, stored, placed, or otherwise come to be located." Generally, HRS scoring and the subsequent listing of a release merely represent the initial determination that a certain area may need to be addressed under CERCLA. Accordingly, EPA contemplates that the preliminary description of facility boundaries at the time of scoring will be refined as more information is developed as to where the contamination has come to be located.

NOTES TO THE READER

- 1. The following rules were applied when citing references in this documentation record:
 - A. Tracking numbers are assigned by the region to every page of every reference. The tracking number consists of the reference number followed by the page number within that reference. A tracking number has a two-digit number followed by the sequential number (e.g., 040001, 040002).
 - B. If the reference has an original page number, that page number was cited.
 - C. If the reference cited has no original page number or the pagination is not complete, then the designated tracking number was cited.
 - D. Analytical data are referenced by tracking numbers only.
- 2. Hazardous substances are listed by the names used in the January 2004 Superfund Chemical Data Matrix (SCDM) (Ref. 2).
- 3. Data qualifiers assigned by the Environmental Protection Agency (EPA) Environmental Services Assistance Team (ESAT) data review team may vary from those assigned by the Contract Laboratory Program (CLP) laboratory on the Form I data sheets.
- 4. The following State predecessor agencies that may be referred to throughout this report are now collectively known as the Texas Commission on Environmental Quality (TCEQ): the Texas Water Quality Board (TWQB), the Texas Department of Water Resources (TDWR), the Texas Water Commission (TWC), the Texas Air Control Board (TACB), and the Texas Natural Resource Conservation Commission (TNRCC). The new agency, TCEQ, became effective 1 September 2002, as mandated under the State House Bill 2912 of the 77th Regular Legislative Session.
- 5. Attachment A of this documentation record consists of the following figures:
 - A-1 Facility Location Map
 - A-2 Facility Layout Map
 - A-3 Soil Sample Location Map
 - A-4 Area of Observed Contamination
 - A-5 Level I and Level II Targets

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SITE SUMMARY

The Old Electrical Service Company (ESCO) facility is located at 500 Forrester Street in Greenville, Hunt County, Texas (Ref. 3, p. 1, Ref. 4, p. 1, and Ref. 5, p. 3-1). The facility is located in a mixed rural/residential area on the eastern boundary of the City of Greenville, Texas and is depicted on Figure A1 of Attachment A (Ref. 3, p. 1). The property on which the facility is located is approximately 5 acres in size and consists of several buildings attached to form one main building, a small shed, and open land. Operations have ceased, but the property is still being used by Hunt County for equipment storage (Ref. 5, p. 3-3). The land surface located to the west of the facility is partially covered by grass and pavement. The land surface to the east is a mixed grass and tree-covered area with several single-family residences. A small drainage ditch is located on the east side of the metal building and traverses in a north to south direction and empties into a drainage ditch adjacent to the frontage road of U.S. Highway 67 (Ref. 4, p. 1 and Ref. 5, p. 3-1, 3-3). The layout of the former Old ESCO facility is depicted on Figure A2 of Attachment A (Ref. 4, p. 1).

Sampling events were conducted in February, April, June, and August of 2005 and January and June of 2007 (Ref. 5, p. 4-1 and Ref. 16, pp. 1-37). Surface and subsurface soil samples, sediment samples, paint chip samples, and pecan tissue samples have been collected; however, only the soil samples will be presented in this documentation record because the Soil Exposure Pathway is the only pathway being scored (Ref. 5, p. 4-1). The facility and properties surrounding the facility have been sampled extensively; more than 3,000 soil samples have been collected in 2005 and 2007. In an effort to reduce the data to a manageably sized set, as well as the resulting reference documentation, the best and most representative data was utilized to evaluate the facility. The methodology of data reduction used is as follows:

- First, samples collected from greater than two feet below ground surface were eliminated since hazardous substances must be present at the surface or covered by two feet or less of material to establish observed contamination (Ref. 1, Sec. 5.0.1).
- Second, the analytical results for the remaining soil samples were compared against the background values established for the site.
- Third, the sample locations of the resulting data set were then plotted on a figure. The outermost sample locations were chosen for inclusion to define the extent of contamination. If two or more samples were collected from the same location (i.e., one sample from each of the three depth intervals being evaluated), then only the analytical result with the highest polychlorinated biphenyl (PCB) concentration was used. If two or more samples were located in close proximity, then the sample with the highest PCB concentration was used. If a parent and duplicate sample pair were collected and PCBs were detected in both samples, then the sample with the highest PCB concentration was used.

The analytical data presented in this documentation record are representative of the conditions at the site. Other sampling data supports the presence of PCBs in soils. However, additional removal assessment is on-going. Summary tables presenting the analytical data results of the soil samples collected to date (0 to 12 inches only) are provided as Reference 82. Soil sample locations presented in this documentation record are depicted on Figure A3 of Attachment A.

The area of contaminated soil is defined by the following surface soil samples meeting observed contamination criteria collected during sampling events conducted in January and June 2007: FRM-15, FRM-28, FRM-25, FRM-24, FRM-23, FRM-22, FRM-21, FRM-19, 1009, FOR-22, FOR-30, A6-14, DRN-10, DRN-09, DRN-08, DRN-07, DRN-02, FOR-51, FOR-47, FOR-43, FOR-41, FOR-40, FOR-36, FOR-35, FOR-34, FOR-32, FOR-31, HDM-01, HDM-02, HDM-03, HDM-04, HDM-05, HDM-06, HDM-07, HDM-08, AND HDM-09 (Ref. 1, Sec. 2.3, Table 2-3; Ref. 6, pp. 1-5, 10-21, 23; Ref. 7, pp. 1-4, 15-19, 21-31; Ref. 8, pp. 1-4, 9, 11, 19-27, 30, 32; Ref. 9, pp. 1-4, 36-44, 46; Ref. 10, pp. 1-17; Ref. 11, pp. 1-4, 29, 30, 35-42, 46; Ref. 12, pp. 1-4, 7, 8, 13, 16, 18, 19, 20, 23-34; Ref. 13, pp. 1-5, 7, 12-20, 23; Ref. 14, pp. 1-4, 26-28, 30-33, 35-43, 45, 46; Ref. 15, pp. 1-4, 8-23, 25, 27-29; and Ref. 16, pp. 18, 22-24, 26-27, 29-30, 33-36). These sample locations are depicted on Figure A4 of Attachment A, which also depicts the estimated area of contamination.

The ESCO facility began operations in 1945 and operated until March 1991. ESCO manufactured, repaired, and refurbished electrical transformers and high-voltage switchgear for electrical distribution. Other manufacturing operations at the site included metal fabrication, welding, grinding, sandblasting, silver electroplating, and painting (Ref. 5, p. 3-1; Ref. 17, p. 6). It appears that the site initially came under investigation in July 1980 when the Texas Department of Water Quality received a complaint that transformer oil had been disposed of at the site. Laboratory analysis of surface soil samples collected from areas near the building and parking lot indicated concentrations of PCBs as high as 85,000 milligrams per kilogram (mg/kg) (Ref. 17, p. 6).

The Texas Commission on Environmental Quality (TCEQ), formerly known as the Texas Water Commission (TWC), then conducted a Phase I Environmental Site Assessment (ESA), including limited surface soil and ground water sampling activities, in February 2003 (Ref. 17, p. 6). In general, PCBs were detected in surface soil samples and one of the existing monitoring wells (Ref. 17, p. 7). Additionally, two underground storage tanks were suspected at the site based on information collected during the Phase I ESA (Ref. 17, p. 7).

The TCEQ conducted a Phase II ESA of the site in June 2003 (Ref. 17, p. 8). During the Phase II ESA, ground water samples were collected from a newly installed monitoring well and an existing monitoring well, two soil borings were advanced, and surface soil and subsurface soil samples were collected (Ref. 17, pp. 8-10). Chemical analysis of the surface soil samples indicated the presence of PCBs (aroclor 1260) above the Tier I commercial/industrial Protective Concentration Level of 7,700 micrograms per kilogram (μ g/kg) in numerous soil samples collected from the site (Ref. 17, p. 12). The highest concentration of PCBs detected was 2,390,000 μ g/kg (Ref. 17, p. 12).

The Environmental Protection Agency (EPA) and the EPA Region 6 Superfund Technical Assistance and Response Team (START)-2 performed a reconnaissance of the ESCO facility in November 2004 in preparation of a removal assessment (Ref. 5, p. 3-3 and 3-4). During the reconnaissance, several 55-gallon drums and 5-gallon containers were observed in the main building and three drums were observed in the small shed (Ref. 5, pp. 3-3 and 3-4). The smaller 5-gallon containers were not present at the time of the February 2005 field activities (Ref. 5, pp. 3-3 and 3-4). At the time of the February 2005 sampling activities, Hunt County was in the process of demolishing and removing debris from the northern portion of the main building (Ref. 5, p. 3-4).

During the site reconnaissance, three transformers were observed on the east side of the ESCO property. The transformers were situated on a concrete pad and no additional secondary containment was present surrounding the transformer area. Visible staining was observed on one of the transformers as well as on the underlying concrete pad (Ref. 5, p. 3-4). The transformer area is surrounded by a broken fence, thus allowing access to the three transformers. Each transformer contained approximately three-quarters of its 250-gallon storage capacity at the time of the February 2005 removal assessment (Ref. 5, p. 3-4).

EPA and START-2 conducted a removal assessment during 2005. Sampling events were conducted in February, April, June, and August of 2005 (Ref. 5, p. 4-1). During the June 2005 sampling event, START-2 observed dirt and debris in a low area just west of the former parking lot (Ref. 5, p. 3-3). Surface soil samples were collected from the ESCO facility and adjacent residential properties. Analytical results of samples collected off the facility and from nearby residences demonstrate that site-related contaminants had migrated off-facility to the north and east of the former facility (Ref. 5, pp. 4-2 - 4-13, 5-1 - 5-17, 6-2 - 6-5 and Ref. 82, pp. 1-181).

The EPA and START-3 conducted an additional removal assessment in January and June 2007 to further delineate the extent of contamination horizontally and vertically, to delineate contaminant hotspots on the facility property and off of the facility property, and determine background concentrations for the area (Ref. 18, pp. 7, 13, 16 and Ref. 16, pp. 1-37). It should be noted that, as of October 2007, a removal has not been conducted at the site.

No specific site records are available to determine exactly how PCBs may have migrated from the site. One suspected method of migration is spray application as a means of dust suppression and control of vegetation (Ref. 86, p. 4). This method of migration appears to be likely since the PCB contamination is present upgradient of the facility along the roadways based on the locations of soil samples meeting observed contamination criteria and the topography of the area (refer to Figures A3 and A4 and Ref. 3, p. 1). Another possible method of contamination is through direct spills and leaks onto the ground. The PCBs in soil could have subsequently migrated off the facility from surface water and/or stormwater runoff and overland flow especially to the west and southwest based on the topography of the area. A drainage ditch is located southwest of the former facility that could have facilitated runoff and off-site migration (refer to Figure A2 and Ref. 3, p. 1). Based on a review of the topographic map and observations made during the field investigations, there are no other facilities in the area that used or manufactured PCBs (Ref. 3, p. 1 and Ref. 85, pp. 1-9).

For the purposes of this HRS Documentation Record, the area of observed contamination, based on the results of the sampling data, includes the facility property, residential areas to the north and east of the facility, and areas to the west of the facility. Specifically, railroad tracks are located north of Contaminated Soil Area A, a trailer park is located northeast of Contaminated Soil Area A, residential areas are located east of Contaminated Soil Area A, Lee Street is located to the south, and the frontage road of Interstate 30 and open fields are located west and northwest of Contaminated Soil Area A (Ref. 4, p. 1). The general facility layout is depicted on Figure A2, and Contaminated Soil Area A is depicted on Figure A4 of Attachment A. A comprehensive figure depicting the soil sample locations from all sampling events conducted in 2005 and 2007 is provided as Reference 4.

WORKSHEET FOR COMPUTING HRS SITE SCORE

		<u>S</u>	$\underline{\mathbf{S^2}}$
1.	Ground Water Migration Pathway Score (S _{gw}) (from Table 3-1, line 13)	NS	NS
2a.	Surface Water Overland/Flood Migration Component (from Table 4-1, line 30)	NS	NS
2b.	Ground Water to Surface Water Migration Component (from Table 4-25, line 28)	NS	NS
2c.	Surface Water Migration Pathway Score (S_{sw}) (Enter the larger of lines 2a and 2b as the pathway score)	NS	NS
3.	Soil Exposure Pathway Score (S _s) (from Table 5-1, line 22)	81.62	6,661.82
4.	Air Migration Pathway Score (S _a) (from Table 6-1, line 12)	NS	NS
5.	Total of $S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		6,661.82
6.	HRS Site Score: Divide the value on line 5 by 4 and take the square root.	40	.81

Notes:

S Score

 S^2 Score squared

NS Not scored

Tables 3-1, 4-1, 4-25, 5-1, and 6-1 refer to score sheets presented in the HRS Rule (Ref. 1). Table 5-1 is reproduced in the following pages of this HRS documentation record for the convenience of the reader.

TABLE 5-1^d SOIL EXPOSURE PATHWAY SCORE SHEET

RESIDENT POPULATION THREAT

Facto	or Categories and Factors	Maximum Value	Value Assigned						
Likelihood of Exposure:									
1.	Likelihood of Exposure	550	550						
Wast	te Characteristics:								
2.	Toxicity	(a)	10,000						
3. 4.	Hazardous Waste Quantity Waste Characteristics	(a) 100	10 18						
Targ	ets:								
5.	Resident Individual	50	50						
6.	Resident Population	(1.)	500						
	6a. Level I Concentrations	(b)	590						
	6b. Level II Concentrations	(b)	35.20						
7	6c. Resident Population (lines 6a + 6b)	(b)	625.20						
7.	Workers	15	5						
8.	Resources	5	0						
9.	Terrestrial Sensitive Environments	(c)	0						
10.	Targets (lines $5 + 6c + 7 + 8 + 9$)	(b)	680.20						
Resid	lent Population Threat Score:								
11.	Resident Population Threat (lines 1 x 4 x 10)	(b)	6,733,980						

SITE SCORE: 40.81

TABLE 5-1^d SOIL EXPOSURE PATHWAY SCORE SHEET

NEARBY POPULATION THREAT

<u>Facto</u>	or Categories and Factors	Maximum Value	Value Assigned				
Likel	ihood of Exposure:						
12. 13. 14.	Attractiveness/Accessibility Area of Contamination Likelihood of Exposure	100 100 500	NS NS NS				
Wast	e Characteristics:						
15. 16. 17.	Toxicity Hazardous Waste Quantity Waste Characteristics	(a) (a) 100	NS NS NS				
Targe	ets:						
18. 19. 20.	Nearby Individual Population Within 1 Mile Targets (lines 18 + 19)	1 (b) (b)	NS NS NS				
Nearby Population Threat Score:							
21.	Nearby Population Threat (lines 14 x 17 x 20)	(b)	NS				
SOIL EXPOSURE PATHWAY SCORE:							
22.	Soil Exposure Pathway Score ^d (S _s) (lines [11+21]/82 subject to a maximum of 100)	2,500 100	81.62				

⁽a) Maximum value applies to waste characteristics category.

⁽b) Maximum value not applicable.

⁽c) No specific maximum value applies to factor; however, pathway score based solely on terrestrial sensitive environments is limited to maximum of 60.

⁽d) Do not round to nearest integer.

NS Not scored.

3.0 GROUND WATER MIGRATION PATHWAY SCORE - NOT SCORED

The ground water migration pathway will not be scored because it is not expected to contribute significantly to the site score. Further, the site score exceeds 28.50 based only on the evaluation of the soil exposure pathway.

4.0 SURFACE WATER MIGRATION PATHWAY SCORE - NOT SCORED

The surface water migration pathway will not be scored because it is not expected to contribute significantly to the site score. Further, the site score exceeds 28.50 based only on the evaluation of the soil exposure pathway.

5.0 SOIL EXPOSURE PATHWAY

5.0.1 General Considerations

Letter by which this area is to be identified: A

Name and description of the area: Contaminated Soil Area A

Location of the area, with reference to a map of the site:

Soil sample locations meeting observed contamination criteria were used to delineate the estimated area of observed contamination, Contaminated Soil Area A. Railroad tracks are located to the north, a trailer park is located to the northeast, residential areas are located to the east, Lee Street is located to the south, and the frontage road of Interstate 30 and open fields are located to the west and northwest of Contaminated Soil Area A. To the southwest, Contaminated Soil Area A is delineated south of Lee Street and U.S. Highway 67. Contaminated Soil Area A is depicted in Figure A3 of Attachment A (Ref. 4, p. 1). Contaminated Soil Area A is located in a mainly rural/residential area just outside the eastern boundary of the city limits of Greenville, Texas as evidenced by the topographic map and aerial photograph used in Figures A1 and A4 of Attachment A (Ref. 3, p. 1 and Ref. 4, p.1). The estimated extent of contamination is based on the sampling data collected to date.

Within and in the immediate vicinity of Contaminated Soil Area A, a small drainage ditch is located on the east side of the metal building at the facility and flows in a north to south direction. The east drainage ditch empties into the south drainage ditch, which is adjacent to the frontage road of U.S. Highway 67. The south drainage ditch flows to the west-northwest and converges with the northern drainage ditch near the southwest boundary of the property (Refer to Figure A2 of Attachment A). The south drainage ditch accepts surface water runoff from the southern portion of the ESCO site. The north drainage ditch accepts surface water runoff from the northern portion of the ESCO site and flows to the west-southwest until it merges with the south drainage ditch. The confluent north-south drainage ditch flows to the southwest and exits the facility property on the north side of the frontage road. The off-facility portion of the drainage ditch flows southwest, beneath U.S. Highway 67, and empties into an unnamed creek, which flows to the southwest (Ref. 5, p. 15; Figure A2 of Attachment A). The drainage flowing under the highway connects the contamination on the north side of the highway with the contamination on the south side within the overall AOC. The topography of the facility slopes to the west-southwest (Ref. 5, p. 15; Ref. 22, p. 5).

Contaminated Soil Area A is further defined by the following surface soil samples (collected 12 inches below ground surface {bgs} or less), which are the outlying most samples collected to date meeting observed contamination criteria: FRM-15, FRM-28, FRM-25, FRM-24, FRM-23, FRM-22, FRM-21, FRM-19, 1009, FOR-22, FOR-30, A6-14, DRN-10, DRN-09, DRN-08, DRN-07, DRN-02, FOR-51, FOR-47, FOR-43, FOR-41, FOR-40, FOR-36, FOR-35, FOR-34, FOR-32, FOR-31, HDM-01, HDM-02, HDM-03, HDM-04, HDM-05, HDM-06, HDM-07, HDM-08, and HDM-09 (Ref. 1, Sec. 2.3, Table 2-3; and Ref. 6, pp. 1-5, 10-21, 23, 27; Ref. 7, pp. 1-4, 15-19, 21-31; Ref. 8,

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pp. 1-4, 9, 11, 19-27, 30, 32; Ref. 9, pp. 1-4, 36-44, 46; Ref. 10, pp. 1-17; Ref. 11, pp. 1-4, 29, 30, 35-42, 46; Ref. 12, pp. 1-4, 7, 8, 13, 16, 18-20, 23-34; Ref. 13, pp. 1-7, 12-20, 23; Ref. 14, pp. 1-4, 26-28, 30-33, 35-43, 45, 46; Ref. 15, pp. 1-4, 8-23, 25, 27-29; and Ref. 16, pp. 18, 22-24, 26-27, 29-30, 33-36). These soil samples identified above were collected as grab samples from one or more of the following depth intervals: 0 to 1 inch bgs, 1 to 6 inches bgs, and 6 to 12 inches bgs (Ref. 16, pp. 18, 22-24, 26-27, 29-30, 33-36 and Ref. 18, pp. 15, 17, 20, 21, 93).

5.1 RESIDENT POPULATION THREAT

5.1.1 <u>Likelihood of Exposure</u>

Information used to evaluate and score the soil exposure pathway is presented in the subsections below (Ref. 1, Sec. 2.2.3).

Establishing Background

Site-specific background values for soils were established to provide a defensible reference point to aid in the evaluation of whether or not a release of hazardous substances has occurred and to account for variability in local concentrations. The site-specific background values were calculated from background sampling results from the 18 August 2005 and 19 June 2007 sampling events (Ref. 9, Ref. 11, Ref. 14, and Ref. 59). Two sample stations, A7-54 and A7-55, were established as background from the August 2005 sampling event. These stations are located immediately east of the facility in an open field (refer to Figures A3 and A4 of Attachment A; Ref. 4, p. 1).

Twenty-one (21) sample stations were established during the June 2007 sampling event within the trailer park located northeast of the ESCO facility for the purposes of establishing background in the area. Analytical results of the background samples are presented on pages 24through 26 of this documentation record. At the time the sampling events were performed, these areas appeared to be indicative of the natural conditions and located outside of the influence of contamination.

The 2005 background soil sample stations is denoted by "A7-54 and A7-55" and the 2007 background soil sample locations are denoted by "CTP" and depicted on Figure A3 of Attachment A. Soil sampling was conducted in accordance with the *EPA Compendium of Emergency Response Team Soil Sampling and Surface Geophysics Procedures* (Ref. 18, p. 14, Ref. 21, p. 20, and Ref. 84, p. 1). Soil samples were collected from three different intervals at each location: 0 to 1 inch bgs, 1 to 6 inches bgs, and 6 to 12 inches bgs (Ref. 16, pp. 30-32, 36-37 and Ref. 18, p. 93).

A total of 3 soil samples are presented from the August 2005 sampling event; one sample from each depth interval being evaluated. The 2005 samples were analyzed for PCBs by an EPA-designated Contract Laboratory Program (CLP) laboratory using (Ref. 87 and Ref. 88). Analytical data produced by the CLP laboratory were independently validated by the Environmental Services Assistance Team (ESAT) (Ref. 87 and Ref. 88). The ESAT validation report has been incorporated into the data package produced by the CLP laboratory and is included as References 87 and 88.

A total of 24 soil samples are presented from the June 2007 sampling event from the 0 to 1 inch bgs interval, including one sample per station plus three duplicate samples (Ref. 9, pp. 5-29; Ref. 11, pp. 5-28; Ref. 14, pp. 5-25; and Ref. 16, pp. 30, 31, 36, and 37 and Ref. 18, p. 93). A total of 23 soil samples are presented from the 1 to 6 inches bgs interval, including one sample per station plus two duplicate samples (Ref. 9, pp. 5-29; Ref. 11, pp. 5-28; Ref. 14, pp. 5-25; Ref. 16, pp. 30-32, 36-37; and Ref. 18, p. 93). A total of 23 soil samples are presented from the 6 to 12 inches bgs interval, including one sample per station plus two duplicate samples (Ref. 9, pp. 5-29, Ref. 11, pp. 5-28;

Ref. 14, pp. 5-25; Ref. 16, pp. 30-32, 36-37; and Ref. 18, p. 93). Information regarding sample stations and locations is presented in the tables on pages 21 through 23 of this documentation record.

The 2007 background samples were analyzed by the EPA's regional laboratory located in Houston, Texas (Ref. 9, Ref. 11, and Ref. 14). Samples were analyzed following the methods specified in the Contract Laboratory Program (CLP) Statement of Work OLM 04.2 for PCBs (Ref. 9, pp. 5-29; Ref. 11, pp. 5-28; Ref. 14, pp. 5-25; and Ref. 19, pp. 1-17). The OLM04.2 Statement of Work is the predecessor to the OLM04.3 and SOM01.1 Statements of Work (Ref. 19, pp. 1-5). Standard EPA procedures for quality assurance and quality control were followed in the analysis and reporting of the background sample results in accordance with the EPA CLP *National Functional Guidelines for Organic Data Review* (Ref. 18, p. 43).

The analytical results of the samples designated as background did not detect the presence of hazardous substances (i.e., polychlorinated biphenyls) exceeding the reporting limit in any of the background samples (Ref. 9, pp. 5-29; Ref. 11, pp. 5-28; and Ref. 14, pp. 5-25). As such, the maximum laboratory reporting limit for samples from each of the three sample intervals will be used as the comparison value to determine significance above background. The analytical results for the background samples and the sample-specific reporting limits are provided in the following data tables on pages 24 through 26 of this documentation record. Only Aroclor-1254 and Aroclor-1260 were detected in the characterization samples used to establish observed contamination. As such, only the analytical results for these compounds have been presented for the background samples. None of the analytical data produced by the EPA regional laboratory was qualified (Ref. 9, pp. 5-29; Ref. 11, pp. 5-28; and Ref. 14, pp. 5-25).

The final analytical reports, including chain of custody forms, produced by the EPA regional laboratory for the background samples are included as References 9, 11, 14, and 59. Background soil sample locations are depicted on Figure A3 of Attachment A.

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AUGUST 2005 BACKGROUND SAMPLES

SAMPLE STATION	DEPTH INTERVAL	SAMPLE LOCATION	REFERENCES
A7-54/F1SH8	0 to 1 inch bgs	Vacant land east of the facility.	Ref. 4, p. 1
A7-55/F1SA6	1 to 6 inches bgs	Vacant land east of the facility.	Ref. 4, p. 1
A7-55/F1SA7	6 to 12 inches bgs	Vacant land east of the facility.	Ref. 4, p. 1

JUNE 2007 BACKGROUND SAMPLES

SAMPLE STATION	DEPTH INTERVAL	SAMPLE LOCATION	REFERENCES	
CTP04	0 to 1 inch*	Trailer park located northeast of facility, near the	Ref. 4, p. 1; Ref. 16, p. 30 and	
	1 to 6 inches	northernmost row of trailers. Sample collected from western edge.	Ref. 20, p. 6	
	6 to 12 inches	western edge.		
CTP05	0 to 1 inch	Trailer park located northeast of facility, near the	Ref. 4, p. 1; Ref. 16, pp. 31,	
	1 to 6 inches	northernmost row of trailers. Sample collected from middle of parcel.	32 and Ref. 20, p. 6	
	6 to 12 inches	initidie of parcer.		
CTP06	0 to 1 inch*	Trailer park located northeast of facility, near the	Ref. 4, p. 1; Ref. 16, p. 37 and	
	1 to 6 inches	northernmost row of trailers. Sample collected from eastern edge.	Ref. 20, p. 6	
	6 to 12 inches	easiern euge.		
CTP07	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 30 and	
	1 to 6 inches	second parcel of trailers. Sample collected from western edge.	Ref. 20, p. 6	
	6 to 12 inches	western edge.		
CTP08	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	second parcel of trailers. Sample collected from middle of parcel.	Ref. 20, p. 6	
	6 to 12 inches	iniddle of parcer.		
CTP09	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 37 and	
	1 to 6 inches	second parcel of trailers. Sample collected from eastern edge near cul-de-sac.	Ref. 20, p. 7	
	6 to 12 inches	eastern eage near cui-de-sac.		
CTP10	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, pp. 30,	
	1 to 6 inches	third parcel of trailers. Sample collected from	31 and Ref. 20, p. 7	
	6 to 12 inches	western edge.		
CTP11	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	third parcel of trailers. Sample collected from	Ref. 20, p. 7	
	6 to 12 inches	middle of parcel.		
CTP12	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 37 and	
	1 to 6 inches	third parcel of trailers. Sample collected from	Ref. 20, p. 7	
	6 to 12 inches	eastern edge.		
CTP13	0 to 1 inch	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches*	fourth parcel of trailers. Sample collected from	Ref. 20, p. 7	
	6 to 12 inches	northwest corner.		
CTP14	0 to 1 inch*	Trailer park located northeast of facility, from the	Ref. 4, p. 1; Ref. 16, p. 31 and	
1 to 6 inches fourth parcel of traile		fourth parcel of trailers. Sample collected from	Ref. 20, p. 7	
	6 to 12 inches	north central portion of parcel.		

st Two samples collected from this location; one parent sample and one duplicate sample.

JUNE 2007 BACKGROUND SAMPLES (Continued)

SAMPLE STATION	DEPTH INTERVAL	SAMPLE LOCATION	REFERENCES	
CTP15	0 to 1 inch	Trailer park located northeast of facility, from the	Ref.4, p. 1; Ref. 16, p. 36 and	
	1 to 6 inches	fourth parcel of trailers. Sample collected from the northeast corner.	Ref. 20, p. 7	
	6 to 12 inches	normeast corner.		
CTP16	0 to 1 inch	Trailer park located northeast of facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from the middle of parcel, western edge.	Ref. 20, p. 7	
	6 to 12 inches	initiatic of parcel, western edge.		
CTP17	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from the center of the parcel.	Ref. 20, p. 7	
	6 to 12 inches	the parcer.		
CTP18	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 36 and	
	1 to 6 inches*	parcel of trailers. Sample collected from the middle of parcel, eastern edge.	Ref. 20, p. 7	
	6 to 12 inches	of parcer, easiern eage.		
CTP19	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from the lower part, western edge.	Ref. 20, p. 7	
	6 to 12 inches	part, western edge.		
CTP20	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from middle of lower part.	Ref. 20, p. 7	
	6 to 12 inches	lower part.		
CTP21	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 36 and	
	1 to 6 inches	parcel of trailers. Sample collected from lower part, eastern edge.	Ref. 20, p. 7	
	6 to 12 inches	Castern Cage.		
CTP22	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from the southwest corner.	Ref. 20, p. 7	
	6 to 12 inches*	southwest corner.		
CTP23	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 31 and	
	1 to 6 inches	parcel of trailers. Sample collected from the south central edge.	Ref. 20, p. 7	
	6 to 12 inches	contra cugo.		
CTP24	0 to 1 inch	Trailer park located northeast of the facility, fourth	Ref. 4, p. 1; Ref. 16, p. 36 and	
	1 to 6 inches	parcel of trailers. Sample collected from the southeast corner.	Ref. 20, p. 7	
	6 to 12 inches*	southeast corner.		

^{*} Two samples were collected from this location; one parent sample and one duplicate sample.

BACKGROUND SOIL SAMPLE RESULTS: 00 TO 01 INCHES AUGUST 2005 AND JUNE 2007

SAMPLE ID	AROCLOR-1254 μg/kg (SQL/RL)	AROCLOR-1260 μg/kg (SQL/RL)	REFERENCES
A754-D35-01/ F1SH8	U (34)	U (34)	Ref. 4, p. 1; Ref. 87, pp. 1-10
CTP04-51-00	U (48)	U (48)	Ref. 9, pp. 1-5, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP04-52-00	U (48.9)	U (48.9)	Ref. 9, pp. 1-4, 8, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP05-51-00	U (49.7)	U (49.7)	Ref. 9, pp. 1-4, 9, 37-44, 46; Ref. 16, p. 31; Ref. 20, p. 6
CTP06-51-00	U (51.3)	U (51.3)	Ref. 11, pp. 1-5, 35-43; Ref. 16, p. 37; Ref. 20, p. 6
CTP06-52-00	U (55.1)	U (55.1)	Ref. 11, pp. 1-4, 8, 35-43; Ref. 16, p. 37; Ref. 20, p. 6
CTP07-51-00	U (64.4)	U (64.4)	Ref. 9, pp. 1-4, 12, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP08-51-00	U (46.1)	U (46.1)	Ref. 9, pp. 1-4, 15, 37-44, 47; Ref. 16 p. 31; Ref. 20, p. 6
CTP09-51-00	U (57.4)	U (57.4)	Ref. 11, pp. 1-4, 9, 35-43; Ref. 16, p.37; Ref. 20, p. 7
CTP10-51-00	U (50)	U (50)	Ref. 9, pp. 1-4, 18, 37-44, 48; Ref. 16, p. 30; Ref. 20, p. 7
CTP11-51-00	U (50.8)	U (50.8)	Ref. 9, pp. 1-4, 21, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP12-51-00	U (50.5)	U (50.5)	Ref. 11, pp. 1-4, 12, 35-42, 45; Ref. 16, p. 37; Ref. 20, p. 7
CTP13-51-00	U (50.5)	U (50.5)	Ref. 9, pp. 1-4, 24, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP14-51-00	U (50.3)	U (50.3)	Ref. 9, pp. 1-4, 28, 37-44, 46; Ref. 16, p. 31; Ref. 20, p. 7
CTP14-52-00	U (49.5)	U (49.5)	Ref. 14, pp. 1-4, 6, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP15-51-00	U (52.9)	U (52.9)	Ref. 11, pp. 1-5, 15, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP16-51-00	U (52.3)	U (52.3)	Ref. 14, pp. 1-4, 7, 35-43; Ref. 16 p. 31; Ref. 20, p. 7
CTP17-51-00	U (49)	U (49)	Ref. 14, pp. 1-4, 10, 35-42, 44; Ref. 16 p. 31; Ref. 20, p. 7
CTP18-51-00	U (53.4)	U (53.4)	Ref. 11, pp. 1-4, 18, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP19-51-00	U (52.7)	U (52.7)	Ref. 14, pp. 1-4, 13, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP20-51-00	U (49.6)	U (49.6)	Ref. 14, pp. 1-4, 20, 35-42, 47; Ref. 16 p. 31; Ref. 20, p. 7
CTP21-51-00	U (54.8)	U (54.8)	Ref. 11, pp. 1-4, 22, 35-42, 44; ; Ref. 16, p. 36; Ref. 20, p. 7
CTP22-51-00	U (60.6)	U (60.6)	Ref. 14, pp. 1-4, 19, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP23-51-00	U (54.1)	U (54.1)	Ref. 14, pp. 1-4, 23, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP24-51-00	U (51.3)	U (51.3)	Ref. 11, pp. 1-4, 25, 35-42, 44; Ref. 16, p. 36; Ref. 20, p. 7

Notes:

μg/kg micrograms per kilogram.

The sample quantitation limit (SQL) is provided for samples analyzed under the CLP and the sample-specific reporting limit (RL) is provided for samples analyzed by the EPA regional laboratory since the constituent was not detected at a concentration exceeding the SQL or RL.

U Undetected.

BACKGROUND SOIL SAMPLE RESULTS: 01 TO 06 INCHES AUGUST 2005 AND JUNE 2007

SAMPLE ID	AROCLOR-1254 μg/kg (SQL/RL)	AROCLOR-1260 μg/kg (SQL/RL)	REFERENCES
A755-N272-06 F1SA6	U (35)	U (35)	Ref. 4, p. 1; Ref. 88, pp. 1-10, 12
CTP04-51-06	U (45.6)	U (45.6)	Ref. 9, pp. 1-4, 6, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP05-51-06	U (42.4)	U (42.4)	Ref. 9, pp. 1-4, 10, 37-44, 46; Ref. 16, pp. 31-32; Ref. 20, p. 6
CTP06-51-06	U (47.5)	U (47.5)	Ref. 11, pp. 1-4, 6, 35-43; Ref. 16, p. 37; Ref, 20, p. 6
CTP07-51-06	U (51)	U (51)	Ref. 9, pp. 1-4, 13, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP08-51-06	U (43.9)	U (43.9)	Ref. 9, pp. 1-4, 16, 37-44, 47; Ref. 16, p. 31; Ref. 20, p. 6
CTP09-51-06	U (42.8)	U (42.8)	Ref. 11, pp. 1-4, 10, 35-43; Ref. 16, p. 37; Ref. 20, p. 7
CTP10-51-06	U (43.6)	U (43.6)	Ref. 9, pp. 1-4, 19, 37-44, 48; Ref. 16, p. 30; Ref. 20, p. 7
CTP11-51-06	U (47.2)	U (47.2)	Ref. 9, pp. 1-4, 22, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP12-51-06	U (50.3)	U (50.3)	Ref. 11, pp. 1-4, 13, 35-42, 45; Ref. 16, p. 37; Ref. 20, p. 7
CTP13-51-06	U (53.6)	U (53.6)	Ref. 9, pp. 1-4, 25, 37-44, 48; Ref. 16 p. 31; Ref. 20, p. 7
CTP13-52-06	U (48.5)	U (48.5)	Ref. 9, pp. 1-4, 27, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP14-51-06	U (48.3)	U (48.3)	Ref. 9, pp. 1-4, 29, 37-44, 46; Ref. 16, p. 31; Ref. 20, p. 7
CTP15-51-06	U (50.8)	U (50.8)	Ref. 11, pp. 1-4, 16, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP16-51-06	U (47.7)	U (47.7)	Ref. 14, pp. 1-4, 8, 35-43; Ref. 16, p. 31; Ref. 20, p. 7
CTP17-51-06	U (45.1)	U (45.1)	Ref. 14, pp. 1-4, 11, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP18-51-06	U (46.5)	U (46.5)	Ref. 11, pp. 1-4, 19, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP18-52-06	U (46.5)	U (46.5)	Ref. 11, pp. 1-4, 21, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP19-51-06	U (50.2)	U (50.2)	Ref. 14, pp. 1-4, 14, 35-42, 44; Ref. 16 p. 31; Ref. 20, p. 7
CTP20-51-06	U (48)	U (48)	Ref. 14, pp. 1-4, 17, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP21-51-06	U (48.2)	U (48.2)	Ref. 11, pp. 1-4, 23, 35-43, 44; Ref. 16, p. 36; Ref. 20, p. 7
CTP22-51-06	U (44.6)	U (44.6)	Ref. 14, pp. 1-4, 20, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP23-51-06	U (50.7)	U (50.7)	Ref. 14, pp. 1-4, 24, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP24-51-06	U (46.9)	U (46.9)	Ref. 11, pp. 1-4, 26, 35-42, 44; Ref. 16, p. 36; Ref. 20, p. 7

Notes:

U Undetected.

 $\mu g/kg \qquad \text{micrograms per kilogram}.$

The sample quantitation limit (SQL) is provided for samples analyzed under the CLP and the sample-specific reporting limit (RL) is provided for samples analyzed by the EPA regional laboratory since the constituent was not detected at a concentration exceeding the SQL or RL.

BACKGROUND SOIL SAMPLE RESULTS: 06 TO 12 INCHES AUGUST 2005 AND JUNE 2007

SAMPLE ID	AROCLOR-1254 µg/kg	AROCLOR-1260 µg/kg	REFERENCES
A755-N273-12/ F1SA7	U (36)	U (36)	Ref. 4, p. 1; Ref. 88, pp. 1-9, 11-12
CTP04-51-12	U (46. 1)	U (46.1)	Ref. 9, pp. 1-4, 7, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP05-51-12	U (44.5)	U (44.5)	Ref. 9, pp. 1-4, 11, 37-44, 46; Ref. 16, p. 32; Ref. 20, p. 6
CTP06-51-12	U (46.6)	U (46.6)	Ref. 11, pp. 1-4, 7, 35-43; Ref. 16, p. 37; Ref. 20, p. 6
CTP07-51-12	U (46.6)	U (46.6)	Ref. 9, pp. 1-4, 14, 37-44, 47; Ref. 16, p. 30; Ref. 20, p. 6
CTP08-51-12	U (44.3)	U (44.3)	Ref. 9, pp. 1-4, 17, 37-44, 47; Ref. 16, p. 31; Ref. 20, p. 6
CTP09-51-12	U (43.6)	U (43.6)	Ref. 11, pp. 1-4, 11, 35-43; Ref. 16, p. 37; Ref. 20, p. 7
CTP10-51-12	U (45)	U (45)	Ref. 9, pp. 1-4, 20, 37-44, 48; Ref. 16, pp. 30, 31; Ref. 20, p. 7
CTP11-51-12	U (46.6)	U (46.6)	Ref. 9, pp. 1-4, 23, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP12-51-12	U (42.3)	U (42.3)	Ref. 11, 1-4, 14, 35-42, 45; Ref. 16, p. 37; Ref. 20, p. 7
CTP13-51-12	U (36.3)	U (36.3)	Ref. 9, pp. 1-4, 26, 37-44, 48; Ref. 16, p. 31; Ref. 20, p. 7
CTP14-51-12	U (44.8)	U (44.8)	Ref. 14, pp. 1-5, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP15-51-12	U (49.5)	U (49.5)	Ref. 11, pp. 1-4, 17, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP16-51-12	U (44.6)	U (44.6)	Ref. 14, pp. 1-4, 9, 35-43; Ref. 16, p. 31; Ref. 20, p. 7
CTP17-51-12	U (43.3)	U (43.3)	Ref. 14, pp. 1-4, 12, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP18-51-12	U (47.9)	U (47.9)	Ref. 11, pp. 1-4, 20, 35-42, 45; Ref. 16, p. 36; Ref. 20, p. 7
CTP19-51-12	U (49)	U (49)	Ref. 14, pp. 1-4, 15, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP20-51-12	U (45.8)	U (45.8)	Ref. 14, pp. 1-4, 18, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP21-51-12	U (48.2)	U (48.2)	Ref. 11, pp. 1-4, 24, 35-42, 44; Ref. 16, p. 36; Ref. 20, p. 7
CTP22-51-12	U (49.4)	U (49.4)	Ref. 14, pp. 1-4, 21, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP22-52-12	U (47.3)	U (47.3)	Ref. 14, pp. 1-4, 22, 35-42, 47; Ref. 16, p. 31; Ref. 20, p. 7
CTP23-51-12	U (48.9)	U (48.9)	Ref. 14, pp. 1-4, 25, 35-42, 44; Ref. 16, p. 31; Ref. 20, p. 7
CTP24-51-12	U (47.4)	U (47.4)	Ref. 11, pp. 1-4, 27, 35-42, 44; Ref. 16, p. 36; Ref. 20, p. 7
CTP24-52-12	U (45.5)	U (45.5)	Ref. 11, pp. 1-4, 28, 35-42, 44; Ref. 16, p. 36; Ref. 20, p. 7

Notes:

U Undetected.

ug/kg micrograms per kilogram.

The sample quantitation limit (SQL) is provided for samples analyzed under the CLP and the sample-specific reporting limit (RL) is provided for samples analyzed by the EPA regional laboratory since the constituent was not detected at a concentration exceeding the SQL or RL.

Samples designated as background were collected from the same medium as the characterization samples (i.e., soil) using similar sample collection methods (Ref. 84, p. 1). Background samples were collected from the same or similar soil type as characterization samples (Ref. 22, pp. 7, 9, 18, 20-22). The Soil Survey for Hunt County, Texas was reviewed to determine the similarity of soil types within the area of concern. Physiographically, Hunt County is part of a smooth, vast plain where long parallel drainage ways typically have broad flood plains (Ref. 22, p. 5). The topography at the facility slopes to the west-southwest toward the Cowleech Fork of the Sabine River, approximately ½ mile southwest of the site (Ref. 5, p. 3-4). Most of Hunt County is situated within the Blackland Prairie Land Resource Area (Ref. 22, p. 5). Soils that have profiles that are almost alike make up a soil series. Except for differences in texture of the surface layer of the underlying material, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement (Ref. 22, p. 9).

The soil types at the ESCO site consist of the Crockett Loam and Wilson Silt Loam, which are part of the Loamy Soil on Uplands soil series (Ref. 22, pp. 7, 8, 10-14, 18). Crockett soils are typically deep, moderately well drained loamy soils (Ref. 22, p. 15). Wilson soils consist of deep, somewhat poorly drained, loamy soils (Ref. 22, p. 16).

In a representative profile, the surface layer of the Crockett Loam is a dark grayish brown loam about 7 inches thick. The layer below that extends to approximately 53 inches and is a reddish brown clay that grades to light olive brown (Ref. 22, p. 7). There appears to be two distinct layers of soils in the Crockett unit. They are distinguished by depth intervals; 00 to 07 inches bgs and 07 to 53 inches bgs (Ref. 22, p. 7). The background samples were grouped by depth intervals (0 to 1 inch, 1 to 6 inches, and 6 to 12 inches). The upper two samples were collected in the loam layer and the deepest sample was collected in the clay layer.

In a representative profile, the surface layer of the Wilson Silt Loam is a medium acid, dark grayish brown silt loam about 6 inches thick. Below that, clay extends to a depth of 64 inches and is very dark gray in the upper part, neutral and black in the middle part, and neutral and dark grayish brown in the lower part (Ref. 22, pp. 18, 3-14). The background samples were grouped by depth intervals (0 to 1 inch, 1 to 6 inches, and 6 to 12 inches). The upper two samples were collected in the silt loam layer and the deepest samples was collected in the clay layer.

The analytical testing of the samples designated as background did not detect the presence of hazardous substances associated with the contamination being evaluated (i.e., PCBs). PCBs are a class of organic compounds for which there are no known natural sources (Ref. 23, p. 1). Many commercial PCB mixtures are known in the United States by the trade name Aroclor followed by a four-digit number (Ref. 23, p. 1). PCBs are very stable compounds and do not degrade readily. PCBs were typically used as stabilizing additives in transformer oil from the 1930s through the mid 1970s (Ref. 23, p. 1). The samples established as background are appropriate for use as background as the samples are located outside the influence of potential contamination as evidenced by the absence of PCBs.

Since the presence of hazardous substances above the reporting limit was not detected in the background samples, the maximum reporting limit for each aroclor for each depth interval was assigned as the site-specific background value (Ref. 1, Sec. 2.3, Table 2-3). The site-specific background values

for each contaminant of concern at each of the depth intervals being evaluated are presented in the following table.

SITE-SPECIFIC BACKGROUND SOIL CONCENTRATIONS

SUBSTANCE	DEPTH INTERVAL	MAXIMUM BACKGROUND VALUE
Aroclor-1254	00 to 01 inches bgs	64.4 U μg/kg
Aroclor-1260	00 to 01 inches bgs	64.4 U μg/kg
Aroclor-1254	01 to 06 inches bgs	53.6 U μg/kg
Aroclor-1260	01 to 06 inches bgs	53.6 U μg/kg
Aroclor-1254	06 to 12 inches bgs	49.5 U μg/kg
Aroclor-1260	06 to 12 inches bgs	49.5 U μg/kg

Notes:

 $\begin{array}{ll} bgs & below \ ground \ surface \\ \mu g/kg & micrograms \ per \ kilogram \end{array}$

Establishing Observed Contamination

The facility property and area of observed contamination has been sampled extensively as depicted on Figure A4 in Attachment A, which shows the location of samples collected in February, April, June, and August of 2005 and January and June 2007.

START-2 performed removal assessment activities at the facility on five different occasions: 14 to 28 February 2005, 3 March 2005, 18 to 23 April 2005, 6 to 10 June 2005, and 14 to 19 August 2005 (Ref. 5, p. 4-1). Sampling activities performed by START-2 included sampling soils and sediment located on and off the facility, groundwater monitoring wells located on the facility property, transformers stored at the facility, paint chip and asbestos containing material sampling of the main building, and tissue sampling of pecan trees located off the facility property. The removal assessment activities also included inventorying and segregation of chemicals and hazardous category testing of unknown or unlabeled chemicals stored at the facility (Ref. 5, p. 4-1). START-2 conducted the removal assessment activities under the approved Health and Safety Plans (HASPs) and addendums (Ref. 5, p. 4-1). Latitude and longitude coordinates of the sample locations were obtained with the use of a Trimble global positioning system (GPS) hand-held unit (Ref. 5, p. 4-1 and Ref. 25, pp. 1-23).

Various laboratories were utilized to analyze the samples collected during the 2005 removal assessment. The Test America laboratory, located in Nashville, Tennessee, was procured to analyze samples collected during the February and March 2005 sampling activities (Ref. 5, p. 4-18 and Ref. 26, pp. 1-17). The Test America laboratory also analyzed some of the samples collected in April 2005 (Ref. 5, p. 4-18). EPA-designated CLP laboratories analyzed the soil samples collected during the April, June, and August 2005 sampling events. These included Liberty Analytical and CompuChem (both located in Cary, North Carolina), CEIMIC Corporation (located in Narragansett, Rhode Island), and EnviroSystems (located in Columbia, Maryland) (Ref. 5, p. 4-18 and Ref. 26, pp. 18-68). All of the analytical laboratories analyzed the soil samples for PCBs using EPA SW846 Method 8082 (Ref. 5, p. 4-18 and Ref. 19, pp. 12-13). The START-2 field logbook notes are included as Reference 27.

Analytical data summary packages produced by the CLP laboratories were independently validated by the ESAT (Ref. 5, p. 5-1). The ESAT validation reports have been incorporated into their respective data packages produced by the CLP laboratories and are included as References 29-36, 39-50, 56-66, and 70-74. Chains of custody for the samples submitted to the CLP laboratories are included as Reference 26, pp. 18-68. The analytical data produced by the Test America Laboratory were validated by START-2. These validation reports have been incorporated into their respective Test America data packages, which are included as References 37, 38, 51-55, and 66. Chains of custody for the samples submitted to Test America are included as Reference 26 (pp. 1-17).

START-3 performed additional removal assessment activities at the facility on two different occasions: 22 to 26 January 2007 and 18 to 20 June 2007 (Ref. 16, pp. 1 - 37). Sampling activities performed by START-3 included additional surface and subsurface soil sampling to further delineate the extent of contamination both horizontally and vertically (Ref. 18, p. 7). A systematic grid pattern was utilized

to help locate and delineate contaminant hotspots both on and off the facility property (Ref. 18, p. 7). Soil sampling was conducted in accordance with the *EPA Compendium of Emergency Response Team Soil Sampling and Surface Geophysics Procedures* and the START-3 Standard Operating Procedures (Ref. 18, pp. 14, 45, 57-62, 86-89; and Ref. 84, p. 1). Latitude and longitude coordinates of the sample locations were obtained with the use of a Trimble GPS hand-held unit. These latitude and longitude coordinates are presented in Reference 20.

Samples collected in 2007 were analyzed either by EPA's regional laboratory located in Houston, Texas or by an EPA-designated CLP laboratory. Soil samples were analyzed for PCBs following the methods specified in the CLP Statement of Work (SOW) SOM01.1 (follow on to OLM 04.2 and OLM 04.3) or SW846 Method 8082 (Ref. 19, pp. 1-17). A summary of the changes between the different versions of the CLP SOWs is included in Reference 19. Analytical data summary packages produced by the CLP laboratories were independently validated by ESAT (Ref. 67, pp. 1-9; Ref. 68, pp. 1-7; and Ref. 69, pp. 1-7). The ESAT validation reports have been incorporated into their respective data packages produced by the CLP laboratories, which are included as References 67, 68, and 69. Analytical data summary packages produced by the regional laboratory were reviewed by the representatives of the regional laboratory for completeness (Ref. 75, pp. 1-2; Ref. 76, pp. 1-2; and Ref. 77, pp. 1-7). Information regarding the usability of the data is included within each data package produced by the regional laboratory, which are included as References 75, 76, and 77.

While some samples were analyzed following the SOW OLM 04.2, some were analyzed following the SOW SOM01.1, and some samples were analyzed using SW846 Method 8082, the analytical methods are very similar. A comparison of the specific quality control components of each method was performed and sufficient quality control components were determined to be equivalent (Ref. 19, pp. 12-13).

Background and characterization sample locations are depicted on Figure A3 of Attachment A. The estimated area of observed contamination is depicted on Figure A4 of Attachment A (Ref. 1, Sec. 5.0.1).

Sample analysis of the background samples collected in 2007 was not performed under the EPA CLP; therefore, the reporting limit will be used in place of the sample quantitation limit (Ref. 1, Sec. 2.3, Table 2-3). Further, Aroclor-1254 and Aroclor-1260 were the only PCB compounds detected during analysis in the characterization samples; therefore, only the analytical results for these compounds (background and characterization samples) have been presented in this documentation record.

Characterization samples were collected from the same three depth intervals as the background samples: 00 to 01 inches bgs, 01 to 06 inches bgs, and 06 to 12 inches bgs (Ref. 16, pp. 18, 22-24, 26-27, 29-30, and 33-36; Ref. 18, pp. 15, 19-41, 93; and Ref. 21, pp. 21-24, 29-41). Based on a representative soil profile (described on page 27), changes in the soil type generally coincide with the intervals defined during sample collection such that the soil type within each depth interval can be considered homogenous over the interval and background samples can be appropriately compared to characterization samples collected from the same interval (Ref. 22, pp. 7, 8, 13-14).

SE - Resident Population Threat Likelihood of Exposure

There are no known natural sources of PCBs and PCBs do not degrade readily; therefore, the presence of PCBs in soils in the vicinity of the ESCO facility provides evidence of contamination. The topography of the area slopes to the west-southwest (Ref. 5, p. 3-4). Based on the locations of the samples meeting observed contamination criteria, much of the contamination is located upgradient of the actual facility as depicted on Figure A3 of Attachment A (see also Ref. 3, p. 1). The contamination is largely suspected to be the result of spray application for dust suppression or vegetation reduction purposes along the roadways in the area (Ref. 86, p. 4). The drainage ditches located west and southwest of the former facility could have allowed migration of the contamination as surface water runoff.

The analytical results presented in the following tables provide evidence of hazardous substances associated with Contaminated Soil Area A. The maximum background concentrations established for each specific depth interval were compared to characterization samples collected from the same depth intervals in order to establish observed contamination. Maximum background concentrations are presented on page 28 of this HRS documentation record.

The appropriate factors were applied to the estimated data in accordance with the guidance presented in the EPA Fact Sheet "Using Qualified Data to Document an Observed Release and Observed Contamination" (Ref. 28, pp. 1-14). The calculations to adjust the data and the resulting new values are included in the following tables.

PCB CONCENTRATIONS IN SOIL 00 TO 01 INCHES

SAMPLE/CLP ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND μg/kg	REFERENCES
A130-N01-01/F1L53	06/07/05	1260	460	40	64.4	Ref. 25, p. 4; Ref. 26, p. 38; Ref. 27, pp. 72, 86; Ref. 29, pp. 1-24; Ref. 90, p. 2
A210-N46-01	02/17/05	1260	282	22.2	64.4	Ref. 25, p. 5; Ref. 26, p. 3; Ref. 27, p. 35; Ref. 30, pp. 1-17, 19; 91, p. 1
A215-N71-01	02/17/05	1260	142	21.2	64.4	Ref. 25, p. 5; Ref. 26, p. 2; Ref. 27, p. 9; Ref. 30, pp. 1-17, 21; 91, p. 1
A216-N76-01	02/17/05	1260	657	21.4	64.4	Ref. 25, p. 5; Ref. 26, p . 1; Ref. 27, pp. 9,10; Ref. 30, pp. 1-17, 22; 91, p. 1
A218-D01-01/F1F52	04/21/05	1260	220	72	64.4	Ref. 26, p. 36; Ref. 27, p. 66; Ref. 31, pp. 1-16; Ref. 90, p. 2
A220-N16-01/F1F79	04/21/05	1260	650	93	64.4	Ref. 25, p. 6; Ref. 26, p. 33; Ref. 27,p. 66; Ref. 32, pp. 1-15; Ref. 90, p. 2
A222-D03-01/F1F86	04/21/05	1260	410	83	64.4	Ref. 26, p. 33; Ref. 27, p. 66; Ref. 32, pp. 1-14, 16; Ref. 90, p. 2
A225-N41-01/F1FB9	04/21/05	1260	2600	420	64.4	Ref. 25, p. 6; Ref. 26, p. 35; Ref. 27, pp. 55, 65; Ref. 33, pp. 1-14, 17; Ref. 90, p. 2
A227-N51-01/F1FA3	04/21/05	1260	170	72	64.4	Ref. 25, p. 6; Ref. 26, p. 34; Ref. 27, pp. 55, 65; Ref. 33, pp. 1-15; Ref. 90, p. 2
A230-D07-01/F1FA9	04/20/05	1260	220	79	64.4	Ref. 26, p. 32; Ref. 27, p. 64; Ref. 33, pp. 1-14, 16; Ref. 90, p. 2
A245-N34-01/F1L82	06/07/05	1260	360	90	64.4	Ref. 25, p. 7; Ref. 26, p. 39; Ref. 27, pp. 73, 87; Ref. 34, pp. 1-15; Ref. 90, p. 2
A247-N40-01/F1LC6	06/08/05	1260	910	167	64.4	Ref. 25, p. 7; Ref. 26, p. 42; Ref. 27, pp. 76, 79; Ref. 35, pp. 1-16, 18; Ref. 90, p. 2
A248-D05-01/F1LB1	06/07/05	1260	1600	152	64.4	Ref. 26, p. 41; Ref. 27, pp. 74, 87; Ref. 36, pp. 1-19, 22; Ref. 90, p. 2
A301-N01-01	03/10/05	1260	70.1	23.3	64.4	Ref. 25, p. 8; Ref. 26, p. 5; Ref. 27, p.12; Ref. 37, pp. 1-23; 91, p. 1
A302-N11-01	02/18/05	1260	585	22.8	64.4	Ref. 25, p. 8; Ref. 26, p. 4; Ref. 27, p. 14; Ref. 37, pp. 1-22, 27; 91, p. 1
A304-N16-01	02/18/05	1260	103	25.3	64.4	Ref. 25, p. 2; Ref. 26, p. 5; Ref. 27, p. 13; Ref. 37, pp. 1-22, 24; 91, p. 1

Notes: μg/kg SQL RL micrograms per kilogram Sample Quantitation Limit for CLP data. Reporting Limit for non-CLP data.

PCB CONCENTRATIONS IN SOIL 00 TO 01 INCHES (Continued)

SAMPLE/CLP ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
A311-N51-01	02/18/05	1260	265	23.6	64.4	Ref. 25, p. 8; Ref. 26, p. 6; Ref. 27, p. 13; Ref. 37, pp. 1-22, 25; 91, p. 1
A312-D04-01	02/22/05	1260	91.8	21.4	64.4	Ref. 26, p. 8; Ref. 27, p. 30; Ref. 38, pp. 1-11; 91, p. 1
A313-N61-01	02/22/05	1260	104	22.7	64.4	Ref. 25, p. 8; Ref. 26, p. 8; Ref. 27, p. 13; Ref. 38, pp. 1-10, 12; 91, p. 1
A403-N11-01/F1EM4	04/19/05	1260	570	71	64.4	Ref. 25, p. 9; Ref. 26, p. 24; Ref. 27, pp. 59, 60; Ref. 40, pp. 1-20; Ref. 90, p. 2
A405-N21-01/F1F26	04/21/05	1260	160	78	64.4	Ref. 25, p. 9; Ref. 26, p. 31; Ref. 27, p. 65; Ref. 41, pp. 1-15; Ref. 90, p. 2
A414-D07-01/F1EN0	04/19/05	1260	600	75	64.4	Ref. 26, p. 23; Ref. 27, pp. 53, 60; Ref. 40, pp. 1-19, 21; Ref. 90, p. 2
A423-N111-01/F1EZ8	04/20/05	1260	300	40	64.4	Ref. 25, p. 10; Ref. 26, p. 29; Ref. 27, pp. 54, 61; Ref. 43, pp. 1-16; Ref. 90, p. 2
A424-N116-01/F1EX6	04/20/05	1260	200	76	64.4	Ref. 25, p. 10; Ref. 26, p. 28; Ref. 27, pp.54, 62; Ref. 44, pp. 1-13, 16; Ref. 90, p. 2
A428-N07-01/F1LC9	06/08/05	1260	320	73	64.4	Ref. 25, p. 11; Ref. 26, p. 42; Ref. 27, pp. 75, 88; Ref. 35, pp. 1-16, 19; Ref. 90, p. 2
A431-N16-01/F1LH8	06/08/05	1260	170	76	64.4	Ref. 25, p. 11; Ref. 26, p. 47;Ref. 27, p. 88; Ref. 45, pp. 1-14; Ref. 90, p. 2
A436-N28-01/F1LE8	06/08/05	1260	550	77	64.4	Ref. 25, p. 11; Ref. 26, p. 46;Ref. 27, p. 89;Ref. 46, pp. 1-21; Ref. 90, p. 2
A442-N46-01/F1LN1	06/08/05	1260	430	69	64.4	Ref. 10, pp. 1-16; Ref. 25, p. 11; Ref. 26, p. 51; Ref. 27, p. 78; Ref. 90, p. 2
A444-N52-01/F1LK9	06/08/05	1260	420000	87129	64.4	Ref. 25, p. 11; Ref. 26, p. 49; Ref. 27, p.90; Ref. 45, pp. 1-13, 15; Ref. 90, p. 2
A445-N55-01/F1LL2	06/08/05	1260	140	72	64.4	Ref. 25, p. 11; Ref. 26, p. 49; Ref. 27, pp. 78, 89; Ref. 45, pp. 1-13, 16; Ref. 90, p. 2

Notes:

 $\mu g/kg$

micrograms per kilogram Sample Quantitation Limit for CLP data. SQL RL Reporting Limit for non-CLP data.

SE - Resident Population Threat Likelihood of Exposure

PCB CONCENTRATIONS IN SOIL 00 TO 01 INCHES (Continued)

SAMPLE/CLP ID	DATE	РСВ	VALUE μg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
A448-N64-01/F1LG1	06/08/05	1260	130	73	64.4	Ref. 25, p. 11; Ref. 26, p. 45; Ref. 27, pp. 77, 89; Ref. 46, pp. 1-20, 23; Ref. 90, p. 2
A449-D07-01/F1LG5	06/08/05	1260	560	77	64.4	Ref. 26, p. 45; Ref. 27, pp. 77, 89; Ref. 46, pp. 1-20, 24; Ref. 90, p. 2
A501-N01-01/F1EE8	04/18/05	1260	260	45	64.4	Ref. 25, p. 12; Ref. 26, p. 18; Ref. 27, pp. 50, 51; Ref. 47, pp. 1-11; Ref. 90, p. 2
A503-N11-01/F1EH8	04/19/05	1260	160	85	64.4	Ref. 25, p. 12; Ref. 26, p. 20; Ref. 27, pp. 50, 58, 59; Ref. 48, pp. 1-12, 14; Ref. 90, p. 2
A515-N04-01/F1LD8	06/08/05	1260	190	79	64.4	Ref. 25, p. 13; Ref. 26, p. 43; Ref. 27, pp. 76, 77, 88; Ref. 50, pp. 1-21; Ref. 90, p. 2
A611-N13-01/F1LQ2	06/09/05	1254	1900	746	64.4	Ref. 25, p. 14; Ref. 26, p. 53; Ref. 27, pp. 81, 82, 91; Ref. 56, pp. 1-15, 17; Ref. 90, p. 2
		1260	1300	746	64.4	
A612-N16-01/F1LQ6	06/09/05	1254	1200	739	64.4	Ref. 25, p. 14; Ref. 26, p. 53; Ref. 27, pp. 81, 82, 91; Ref. 56, pp. 1-15, 19; Ref. 90, p. 2
		1260	2900	739	64.4	
A614-N22-01/F1LN6	06/08/05	1260	71000	68019	64.4	Ref. 10, pp. 1-15, 17; Ref. 25, p. 14; Ref. 26, p. 52; Ref. 27, pp. 78, 90; Ref. 90, p. 2
A704-N016-01/F1SS8	08/18/05	1260	160	34	64.4	Ref. 25, p. 14; Ref. 26, p. 68; Ref. 27, p. 103; Ref. 57, pp. 1-9; Ref. 90, p. 2
A707-N031-01/F1SR6	08/18/05	1260	100	35	64.4	Ref. 25, p. 14; Ref. 26, p. 67; Ref. 27, p. 103; Ref. 58, pp. 1-8; Ref. 90, p. 2

Note:

 $\begin{array}{c} \mu g/kg \\ SQL \end{array}$ micrograms per kilogram
Sample Quantitation Limit for CLP data. RĹ Reporting Limit for non-CLP data.

PCB CONCENTRATIONS IN SOIL 00 TO 01 INCHES (Continued)

SAMPLE/CLP ID	DATE	РСВ	VALUE μg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND μg/kg	REFERENCES
A714-N066-01/F1S82	08/16/05	1260	190	40	64.4	Ref. 25, p. 15; Ref. 26, p . 62; Ref. 27, pp. 96, 102; Ref. 59, pp. 1-10; Ref. 90, p. 2
A724-N116-01/F1RP0	08/15/05	1254	1200	35	64.4	Ref. 25, p. 16; Ref. 26, p . 56; Ref. 27, pp. 94, 100; Ref. 60, pp. 1-16, 17; Ref. 90, p. 2
A725-N121-01/F1RP5	08/15/05	1254	6600 J∧ 6600÷10=660	340	64.4	Ref. 25, p. 16; Ref. 26, p . 59; Ref. 27, pp. 94, 100; Ref. 28, pp.1-4, 11; Ref. 61, pp. 1-11; Ref. 90, p. 2
A736-N176-01/F1S58	08/16/05	1260	72	39	64.4	Ref. 25, p. 17; Ref. 26, p. 61; Ref. 27, pp. 95, 102; Ref. 62, pp. 1-13; Ref. 90, p. 2
A740-N196-01/F1RW3	08/15/05	1254	690000	33000	64.4	Ref. 25, p. 17; Ref. 26, p. 57; Ref. 27, pp. 95, 101; Ref. 63, pp. 1-10; Ref. 90, p. 2
A741-N201-01/F1RW9	08/15/05	1254	3000	330	64.4	Ref. 25, p. 17; Ref. 26, p . 58; Ref. 27, p. 101; Ref. 63, pp. 1-9, 11; Ref. 90, p. 2
		1260	3500	330	64.4	
A758-N286-01/F1S64	08/16/05	1260	90	39	64.4	Ref. 25, p. 18; Ref. 26, p . 61; Ref. 27, p. 102; Ref. 62, pp. 1-12, 14; Ref. 90, p. 2
A766-N326-01/F1S00	08/15/05	1260	1500	340	64.4	Ref. 25, p. 20; Ref. 26, p . 64; Ref. 27, pp. 95, 101; Ref. 65, pp. 1-12; Ref. 90, p. 2
1002-51-00	06/18/07	1260	229	48.6	64.4	Ref. 15, pp. 1-4, 6, 16-23, 30; Ref. 16, p. 22 Ref. 20, p.2; 91, p. 1
1005-51-00	06/18/07	1260	194	56.3	64.4	Ref.15, pp. 1-4, 7, 16-24; Ref.16, p. 23; Ref. 20, p. 2; 91, p. 1

Notes:

 $\mu g/kg \qquad \text{micrograms per kilogram}$

 $J \land Sample result$ is estimated and biased high. Actual concentration may be lower than the concentration reported.

SQL Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

PCB CONCENTRATIONS IN SOIL 01 TO 06 INCHES

SAMPLE ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND μg/kg	REFERENCES
A102-D01-06	02/22/05	1260	7230	397	53.6	Ref. 26, p. 7; Ref. 27, p. 37; Ref. 51, pp. 1-11; 91, p. 1
A104-N16-06	02/24/05	1260	54000	10400	53.6	Ref. 25, p. 2; Ref. 26, p. 13; Ref. 27, pp. 34, 40; Ref. 52, pp. 1-10, 15; 91, p. 1
A105-N21-06	02/24/05	1260	5260	1020	53.6	Ref. 25, p. 2; Ref. 26, p. 13; Ref. 27, p. 40; Ref. 52, pp. 1-10, 16; 91, p. 1
A107-N31-06	02/22/05	1260	1710	108	53.6	Ref. 25, p. 2; Ref. 26, p. 7; Ref. 27, pp. 17, 37; Ref. 51, pp. 1-10, 12; 91, p. 1
A108-N36-06	02/24/05	1260	87300	12200	53.6	Ref. 25, p. 2; Ref. 26, p. 13; Ref. 27, pp. 24, 40; Ref. 52, pp. 1-10, 17; 91, p. 1
A109-N44-06	02/24/05	1260	12700	1990	53.6	Ref. 25, p. 2; Ref. 26, p. 13; Ref. 27, p. 40; Ref. 52, pp. 1-10, 18; 91, p. 1
A110-N49-06	02/23/05	1260	28500	3750 U	53.6	Ref. 25, p. 2; Ref. 27, p. 40; Ref. 52, pp. 1-10, 19; 91, p. 1
A111-N54-06	02/23/05	1260	4920	430	53.6	Ref. 25, p. 2; Ref. 26, p. 10; Ref. 27, p. 38; Ref. 53, pp. 1-8; 91, p. 1
A112-N63-06	02/23/05	1260	56800	10500	53.6	Ref. 25, p. 2; Ref. 26, p. 10; Ref. 27, p. 20; Ref. 53, pp. 1-7, 9; 91, p. 1
A113-N72-06	02/23/05	1260	52800	1850	53.6	Ref. 25, p. 3; Ref. 27, pp. 25, 40; Ref. 52, pp. 1-10, 20; 91, p. 1
A114-N78-06	02/25/05	1260	491000	9330	53.6	Ref. 25, p. 3; Ref. 26, p. 16; Ref. 27, pp. 27, 103; Ref. 54, pp. 1-9, 11; 91, p. 1
A116-N96-06	02/23/05	1260	213000	11600	53.6	Ref. 25, p. 3; Ref. 26, p. 10; Ref. 27, p. 38; Ref. 53, pp. 1-7, 10; 91, p. 1
A117-N101-06	02/23/05	1260	25000	1000	53.6	Ref. 25, p. 3; Ref. 27, p. 40; Ref. 52, pp. 1-10, 21; 91, p. 1
A119-N115-06	02/25/05	1260	7120	928	53.6	Ref. 25, p. 3; Ref. 26, p. 14; Ref. 27, pp. 27, 44; Ref. 52, pp. 1-12; 91, p. 1
A120-N120-06	02/23/05	1260	1440000	112000	53.6	Ref. 25, p. 3; Ref. 26, p. 10; Ref. 27, pp. 18, 38; Ref. 53, pp. 1-7, 11; 91, p. 1
A121-N129-06	02/25/05	1260	3390000	202000	53.6	Ref. 25, p. 3; Ref. 26, p. 14; Ref. 27, pp. 27, 41; Ref. 52, pp. 1-11, 13; 91, p. 1
A122-N134-06	02/25/05	1260	127000	9960	53.6	Ref. 25, p. 3; Ref. 26, p. 16; Ref. 27, pp. 27; Ref. 54, pp. 1-10; 91, p. 1

micrograms per kilogram

<u>Note</u>: μg/kg SQL Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

SAMPLE/CLP ID	DATE	РСВ	VALUE μg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
A123-N143-06	02/26/05	1260	7060	412	53.6	Ref. 25, p. 3; Ref. 26, p. 17; Ref. 27, p. 45; Ref. 55, pp. 1-11; 91, p. 1
A124-N152-06	02/25/05	1260	458000	45400	53.6	Ref. 25, p. 3; Ref. 26, p. 14; Ref. 27, p. 41; Ref. 52, pp. 1-11, 14; 91, p. 1
A126-N180-06	02/23/05	1260	481	19.7	53.6	Ref. 27, pp. 21, 39; Ref. 53, pp. 1-7, 13; 91, p. 1
A127-N171-06	02/23/05	1260	53900	4270	53.6	Ref. 25, p. 4; Ref. 26, p. 12; Ref. 27, pp. 21, 39; Ref. 53, pp. 1-7, 12; 91, p. 1
A132-N10-06/F1L63	06/07/05	1260	1000	80	53.6	Ref. 25, p. 4; Ref. 26, p. 38; Ref. 27, pp. 73, 75; Ref. 29, pp. 1-23, 25; Ref. 90, p. 2
A214-N67-06	02/17/05	1260	255	21	53.6	Ref. 25, p. 5;Ref. 26, p. 2;Ref. 27,p. 36;Ref. 30, pp. 1-17, 20; 91, p. 1
A236-N08-06/FIL93	06/07/05	1260	8700	1435	53.6	Ref. 25, p. 7; Ref. 26, p. 40;Ref. 27, p. 86;Ref. 36, pp. 1-20; Ref. 90, p. 2
A407-N32-06/F1ER4	04/19/05	1260	140	37	53.6	Ref. 25, p. 9 Ref. 26, p. 27; Ref. 27, pp. 53, 59; Ref. 39, pp. 1-14, 16; Ref. 90, p. 2
A413-N62-06/F1ET5	04/20/05	1260	130	75	53.6	Ref. 25, p. 9; Ref. 27, p. 62; Ref. 44, pp. 1-14; Ref. 90, p. 2
A419-N92-06/F1EY2	04/19/05	1260	300	40	53.6	Ref. 25, p. 10; Ref. 26, p. 28; Ref. 27, pp. 53, 60; Ref. 44, pp. 1-13, 17; Ref. 90, p. 2
A432-N20-06/F1LH0	06/08/05	1260	200	75	53.6	Ref. 25, p. 11; Ref. 26, p. 44; Ref. 27, p. 88; Ref. 50, pp. 1-20, 23; Ref. 90, p. 2
A504-N17-06/F1EJ3	04/19/05	1260	150	39	53.6	Ref. 25, p. 12; Ref. 26, p. 20; Ref. 27, pp. 50, 58; Ref. 48, pp. 1-12, 15; Ref. 90, p. 2
A507-N32-06/F1EG8	04/19/05	1260	81	43	53.6	Ref. 25, p. 12;Ref. 26, p. 19;Ref. 27,p. 52;Ref. 48, pp.1-13; Ref. 90, p. 2
A516-N08-06/F1LE3	06/08/05	1260	120	77	53.6	Ref. 25, p. 13; Ref. 26, p. 43; Ref. 27, p. 88; Ref. 50, pp. 1-20, 22; Ref. 90, p. 2
A606-N21-06	04/20/05	1260	193	19.1	53.6	Ref. 25, p. 13; Ref. 26, p. 37; Ref. 27, p. 63; Ref. 66, pp. 1-11; 91, p. 1
A609-N08-06/F1LP7	06/09/05	1260	310	73	53.6	Ref. 25, p. 13; Ref. 26, p. 53;Ref. 27, p. 91; Ref. 56, pp. 1-16; Ref. 90, p. 2
1001-51-06	06/18/07	1260	2830	226	53.6	Ref. 15, pp. 1-5, 16-23, 27; Ref. 16, p. 22; Ref. 20, p. 2; 91, p. 1

Note:

micrograms per kilogram

 $\frac{\mu g/kg}{SQL}$ Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

SAMPLE/CLP ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
1009-51-06	06/18/07	1260	59.1	46.6	53.6	Ref. 6, pp. 1-5, 14-21, 27; Ref. 16, p. 24; Ref. 20, p. 2; 91, p. 1
1012-51-06	06/18/07	1260	116	46.9	53.6	Ref. 6, pp. 1-4, 6, 14-21, 26; Ref. 16, p. 24; Ref. 20, p. 2; 91, p. 1
1013-51-06	06/18/07	1260	57.9	47	53.6	Ref. 6, pp. 1-4, 7, 14-21, 24; Ref. 16, p. 24; Ref. 20, p. 2; 91, p. 1
1017-51-06	06/19/07	1260	63.4	48.4	53.6	Ref. 7, pp. 1-5, 21-28, 32; Ref. 16, p. 28; Ref. 20, p. 2; 91, p. 1
DRN02-51-06	01/25/07	1260	19500	1460	53.6	Ref. 13, pp. 1-5, 7, 12-20, 23; Ref. 16, p. 18; Ref. 20, p. 7; 91, p. 1
DRN08-51-06	06/20/07	1260	643	47.3	53.6	Ref. 11, pp. 1-5, 30, 43-50, 54; Ref. 16, p. 36; Ref. 20, p. 7; 91, p. 1
DRN09-51-06	06/20/07	1260	503	51.4	53.6	Ref. 12, pp. 1-4, 19, 23-30, 34; Ref. 16, p. 36; Ref. 20, p. 7; 91, p. 1
DRN09-52-06	06/20/07	1260	494	48.3	53.6	Ref. 12, pp. 1-4, 20, 23-30, 34; Ref. 16, p. 36; Ref. 20, p. 7; 91, p. 1
DRN10-51-06	06/20/07	1260	497	53.5	53.6	Ref. 11, pp. 1-5, 32, 43-50, 54; Ref. 16, p. 36; Ref. 20, p. 7; 91, p. 1
DRN11-51-06	06/20/07	1260	120	51.8	53.6	Ref. 11, pp. 1-5, 34, 43-50, 54; Ref. 16, p. 36; Ref. 20, p. 7; 91, p. 1
DRN12-51-06	06/20/07	1260	201	54.5	53.6	Ref. 11, pp. 1-5, 36, 43-50, 54; Ref. 16, p. 35; Ref. 20, p. 7; 91, p. 1
DRN13-51-06	06/20/07	1260	79.5	52.6	53.6	Ref. 11, pp. 1-5, 38, 43-51; Ref. 16, p. 35; Ref. 20, p. 7; 91, p. 1
DRN14-51-06	06/20/07	1260	210	53.2	53.6	Ref. 11, pp. 1-5, 41, 43-50, 54; Ref. 16, p. 35; Ref. 20, p. 7; 91, p. 1
FOR01-51-06/F2BT7	01/25/07	1260	4100	390	53.6	Ref. 16, p. 15; Ref. 20, p. 8; Ref. 67, pp. 1-20, 22, 31-33, 40; Ref. 90, p. 2
FOR02-51-06/F2BW1	01/25/07	1260	3700 J	390	53.6	Ref. 16, p. 15; Ref. 20, p. 8; Ref. 67, pp. 1-20, 22, 35-37, 41; Ref. 90, p. 2
FOR03-51-06/F2BS8	01/25/07	1260	14000	3900	53.6	Ref. 16, p. 15; Ref. 20, p. 8; Ref. 67, pp. 1-21, 23-26, 38; Ref. 90, p. 2
FOR03-52-06/F2BT2	01/25/07	1260	14000	3700	53.6	Ref. 16, p.159; Ref. 20, p. 8; Ref. 67, pp. 1-21, 28-30; Ref. 90, p. 2

Notes:

SQL Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

SAMPLE ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
FOR08-51-06/F2BX8	01/25/07	1260	1000	370	53.6	Ref. 16, p. 15; Ref. 20, p. 8; Ref. 68, pp. 1-19, 21-25, 33; Ref. 90, p. 2
FOR09-51-06/F2BY2	01/25/07	1260	2300	400	53.6	Ref. 16, p. 15; Ref. 20, p. 8; Ref. 68, pp. 1-19, 26-28, 34; Ref. 90, p. 2
FOR10-51-06/F2BY7	01/25/07	1260	470	43	53.6	Ref. 16, p. 16; Ref. 20, p. 8; Ref. 68, pp. 1-18, 20, 29-32, 35; Ref. 90, p. 2
FOR13-51-06/F2C05	01/25/07	1260	260	39	53.6	Ref. 16, p. 16; Ref. 20, p. 8; Ref. 69, pp. 1-27; Ref. 90, p. 2
FOR15-51-06	06/19/07	1260	77.6	42.3	53.6	Ref. 8, pp. 1-5, 20-28; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR16-51-06	06/19/07	1260	254	44.7	53.6	Ref. 8, pp. 1-4, 6, 20-28; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR17-51-06	06/19/07	1260	242	51	53.6	Ref. 8, pp. 1-4, 7, 20-28; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR18-51-06	06/19/07	1260	175	52.7	53.6	Ref. 8, pp. 1-4, 8, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR21-51-06	06/19/07	1260	248	48.7	53.6	Ref. 9, pp. 1-4, 30, 37-45; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR22-51-06	06/19/07	1260	65.9	51.2	53.6	Ref. 8, pp. 1-4, 11, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR23-51-06	06/19/07	1260	2400	189	53.6	Ref. 8, pp. 1-4, 12, 20-27, 30; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR25-51-06	06/19/07	1260	933	51.9	53.6	Ref. 8, pp. 1-4, 13, 20-27, 30; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR25-52-06	06/19/07	1260	667	51.7	53.6	Ref. 8, pp. 1-4, 14, 20-27, 31; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR26-51-06	06/19/07	1260	2720	241	53.6	Ref. 9, pp. 1-4, 32, 37-45; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR27-51-06	06/19/07	1260	70.6	46	53.6	Ref. 9, pp. 1-4, 33, 37-45; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR28-51-06	06/19/07	1260	95.1	47.6	53.6	Ref. 9, pp. 1-4, 34, 37-45; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR29-51-06	06/19/07	1260	925	45	53.6	Ref. 9, pp. 1-4, 35, 37-44, 46; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1

Note:

micrograms per kilogram

μg/kg SQL Sample Quantitation Limit for CLP data. Reporting Limit for non-CLP data. RL

SE - Resident Population Threat Likelihood of Exposure

PCB CONCENTRATIONS IN SOIL 01 TO 06 INCHES (Continued)

_	01 TO 06 INCHES (Continued)									
SAMPLE ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND μg/kg	REFERENCES				
FOR30-51-06	06/19/07	1260	260	47.6	53.6	Ref. 9, pp. 1-4, 36-44, 46; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1				
EOD21 51 06	06/20/07	1254	90.5	46.8	53.6	Ref. 14, pp. 1-5, 27, 46-54; Ref. 16, p. 33; Ref.				
FOR31-51-06	06/20/07	1260	11800	702	53.6	20, p. 8; 91, p. 1				
EOD21 52 06	06/20/07	1254	88.2	49.7	53.6	Ref. 14, pp. 1-5, 29, 46-54; Ref. 16, p. 33; Ref.				
FOR31-52-06	06/20/07	1260	10000	497	53.6	20, p. 8; 91, p. 1				
FOR32-51-06	06/20/07	1260	4180	439	53.6	Ref. 14, pp. 1-5, 30, 46-54; Ref. 16, p. 33; Ref. 20, p. 9; 91, p. 1				
FOR33-51-06	06/20/07	1260	3670	245	53.6	Ref. 14, pp. 1-5, 32, 46-54; Ref. 16, p. 33; Ref. 20, p. 9; 91, p. 1				
FOR40-51-06	06/20/07	1260	842	48.4	53.6	Ref. 12, pp. 1-4, 7, 23-32; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1				
FOR43-52-06	06/20/07	1260	217	54.6	53.6	Ref. 14, pp. 1-5, 34-42, 4545-53, 56; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1				
FOR45-52-06	06/20/07	1260	193	45.9	53.6	Ref. 12, pp. 1-4, 11, 23-30, 32; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1				
FOR47-51-06	06/20/07	1260	333	43.9	53.6	Ref. 12, pp. 1-4, 13, 23-30, 32; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1				
FOR48-51-06	06/20/07	1260	4220	351	53.6	Ref. 12, pp. 1-4, 14, 23-30, 33; Ref. 16, p. 35; Ref. 20, p. 9; 91, p. 1				
FOR50-51-06	06/20/07	1260	301	51	53.6	Ref. 12, pp. 1-4, 15, 23-30, 33; Ref. 16, p. 35; Ref. 20, p. 9; 91, p. 1				
FOR51-51-06	06/20/07	1260	145	43.6	53.6	Ref. 12, pp. 1-4, 16, 23-30, 33; Ref. 16, p. 35; Ref. 20, p. 9; 91, p. 1				
FOR52-51-06	06/20/07	1260	307	50.2	53.6	Ref. 12, pp. 1-4, 17, 23-30, 33; Ref. 16, p. 35; Ref. 20, p. 9; 91, p. 1				
FRM01-51-06	06/19/07	1260	347	48.1	53.6	Ref. 8, pp. 1-4, 15, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9; 91, p. 1				
FRM02-51-06	06/19/07	1260	515	54.9	53.6	Ref. 8, pp. 1-4, 16, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9; 91, p. 1				
FRM03-51-06	06/19/07	1260	752	46.1	53.6	Ref. 8, pp. 1-4, 17, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9; 91, p. 1				
FRM04-51-06	06/19/07	1260	3010	237	53.6	Ref. 8, pp. 1-4, 18, 20-27, 29; Ref. 16, p. 28; Ref. 20, p.9; 91, p. 1				

Note:

μg/kg SQL RL micrograms per kilogram Sample Quantitation Limit for CLP data. Reporting Limit for non-CLP data.

SAMPLE ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
FRM05-51-06	06/19/07	1260	1440	98.8	53.6	Ref. 7, pp. 1-4, 6, 21-28, 33; Ref. 16, p. 28; Ref. 20, p. 9; 91, p. 1
FRM06-51-06	06/19/07	1260	548	49.7	53.6	Ref. 7, pp. 1-4, 7, 21-28, 33; Ref. 16, p. 28; Ref. 20, p. 10; 91, p. 1
FRM07-51-06	06/19/07	1260	834	48.9	53.6	Ref. 7, pp. 1-4, 8, 21-28, 33; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM09-51-06	06/19/07	1260	1380	86.6	53.6	Ref. 7, pp. 1-4, 10, 21-28, 31; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM11-51-06	06/19/07	1260	912	49.6	53.6	Ref. 7, pp. 1-4, 13, 21-28, 31; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM12-51-06	06/19/07	1260	5080	450	53.6	Ref. 7, pp. 1-4, 14, 21-28, 31; Ref. 16, p. 26; Ref. 20, p. 10; 91, p. 1
FRM14-51-06	06/19/07	1260	366	46	53.6	Ref. 6, pp. 1-4, 9, 14-21, 22; Ref. 16, p. 26; Ref. 20, p. 10; 91, p. 1
FRM15-51-06	06/19/07	1260	78.8	46.3	53.6	Ref. 6, pp. 1-4, 10, 14-21, 23; Ref. 16, p. 26; Ref. 20, p. 10; 91, p. 1
FRM19-51-06	06/19/07	1260	131	48.7	53.6	Ref. 8, pp. 1-4, 19, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 10; 91, p. 1
FRM21-51-06	06/19/07	1260	576	49	53.6	Ref. 7, pp. 1-4, 15, 21-31; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM22-51-06	06/19/07	1260	969	48.3	53.6	Ref. 7, pp. 1-4, 16, 21-29; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM23-51-06	06/19/07	1260	269	44.6	53.6	Ref. 7, pp. 1-4, 17, 21-29; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM24-51-06	06/19/07	1260	138	50.1	53.6	Ref. 7, pp. 1-4, 18, 21-29; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM25-51-06	06/19/07	1260	58.7	48.2	53.6	Ref. 7, pp. 1-4, 19, 21-30; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM26-51-06	06/19/07	1260	105	47.7	53.6	Ref. 7, pp. 1-4, 20, 21-30; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
HDM01-51-06	06/18/07	1260	997	52.2	53.6	Ref. 15, pp. 1-4, 8, 16-23, 29; Ref. 16, p. 22; Ref. 20, p. 10; 91, p. 1

Note:

micrograms per kilogram
Sample Quantitation Limit for CLP data. $\begin{array}{c} \mu g/kg \\ SQL \end{array}$ RLReporting Limit for non-CLP data.

SAMPLE ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
HDM02-51-06	06/18/07	1260	846	46.4	53.6	Ref. 15, pp. 1-4, 9, 16-23, 29; Ref. 16, p. 22; Ref. 20, p. 10; 91, p. 1
HDM03-51-06	06/18/07	1260	648	45.7	53.6	Ref. 15, pp. 1-4, 10, 16-23, 28; Ref. 16, p. 22; Ref. 20, p. 10; 91, p. 1
HDM04-51-06	06/18/07	1260	690	47.7	53.6	Ref. 15, pp. 1-4, 11, 16-23, 28; Ref. 16, p. 22; Ref. 20, p. 10; 91, p. 1
HDM05-51-06	06/18/07	1260	391	44.9	53.6	Ref. 15, pp. 1-4, 12, 16-23, 28; Ref. 16, p. 22; Ref. 20, p. 10; 91, p. 1
HDM06-51-06	06/18/07	1260	248	47.5	53.6	Ref. 15, pp. 1-4, 13, 16-23, 25; Ref. 16, p. 23; Ref. 20, p. 10; 91, p. 1
HDM07-51-06	06/18/07	1260	244	43.9	53.6	Ref. 15, pp. 1-4, 14, 16-23, 25; Ref. 16, p. 23; Ref. 20, p. 10; 91, p. 1
HDM08-51-06	06/18/07	1260	155	48.1	53.6	Ref. 15, pp. 1-4, 15-23, 25; Ref. 16, p. 23; Ref. 20, p. 10; 91, p. 1
HDM09-51-06	06/18/07	1260	3720	211	53.6	Ref. 6, pp. 1-4, 12, 14-21, 27; Ref. 16, p. 23; Ref. 20, p. 11; 91, p. 1
HDM09-52-06	06/18/07	1260	3010	180	53.6	Ref. 6, pp. 1-4, 13-21, 27; Ref. 16, p. 23; Ref. 20, p. 11; 91, p. 1
OEM01-51-06	01/24/07	1260	8560	425	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-5, 15- 22; 91, p. 1
OEM02-51-06	01/24/07	1260	6490	500	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-4, 6, 15-21, 23; 91, p. 1
OEM02-52-06	01/24/07	1260	7170	436	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-4, 7, 15-21, 23; 91, p. 1
OEM03-51-06	01/24/07	1260	8810	463	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-4, 8, 15-21, 23; 91, p. 1
OEM04-51-06	01/24/07	1260	8870	423	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-4, 9, 22; 91, p. 1
OEM05-51-06	01/22/07	1260	34400	2380	53.6	Ref. 16, p. 5; Ref. 20, p. 11; Ref. 76, pp. 1-5, 10-18; 91, p. 1
OEM06-51-06	01/22/07	1260	15700	884	53.6	Ref. 16, p. 5; Ref. 20, p. 11; Ref. 76, pp. 1-4, 6, 10-17, 19; 91, p. 1
OEM07-51-06	01/22/07	1260	5230	438	53.6	Ref. 16, p. 5; Ref. 20, p. 11; Ref. 76, pp. 1-4, 7, 10-18; 91, p. 1

Note:

micrograms per kilogram

 $\begin{array}{c} \mu g/kg \\ SQL \end{array}$ Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

SAMPLE ID	DATE	PCB	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
OEM07-52-06	01/22/07	1260	4610	235	53.6	Ref. 16, p. 8; Ref. 20, p. 11; Ref. 76, pp. 1-4, 8, 10-18; 91, p. 1
OEM08-51-06	01/22/07	1260	3030	233	53.6	Ref. 16, p. 5; Ref. 20, p. 11; Ref. 76, pp. 1-4, 9, 10-17, 19; 91, p. 1
OEM09-51-6	01/22/07	1260	103	42.2	53.6	Ref. 16, p. 4; Ref. 20, p. 11; Ref. 76, pp. 1-4, 10-17, 19, 24; 91, p. 1
OEM10-51-06	01/24/07	1260	29100	1850	53.6	Ref. 16, p. 12; Ref. 20, p. 11; Ref. 75, pp. 1-4, 10, 15-21, 24; 91, p. 1
OEM11-51-06	01/24/07	1260	30300	1900	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 75, pp. 1-4, 11, 15-21, 25; 91, p. 1
OEM12-51-06	01/24/07	1260	33900	1950	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 75, pp. 1-4, 12, 15-21, 25; 91, p. 1
OEM13-51-06	01/24/07	1260	21600	2020	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 77, pp. 1-5, 10-17, 19; 91, p. 1
OEM14-51-06	01/24/07	1260	26600	1450	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 75, pp. 1-4, 13, 15-21, 26; 91, p. 1
OEM15-51-06	01/24/07	1260	5640	460	53.6	Ref. 13, pp. 1-5, 8, 12-20, 24; Ref. 16, p. 13; Ref. 20, p. 11; 91, p. 1
OEM16-51-06	01/24/07	1260	41300	2310	53.6	Ref. 13, pp. 1-5, 9, 12-20, 24; Ref. 16, p. 13; Ref. 20, p. 11; 91, p. 1
OEM16-52-06	01/24/07	1260	49500	2300	53.6	Ref. 13, pp. 1-5, 10, 12-20, 24; Ref. 16, p. 13; Ref. 20, p. 11; 91, p. 1
OEM17-51-06	01/24/07	1260	11200	955	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 77, pp. 1-4, 6, 10-17, 19; 91, p. 1
OEM19-51-06	01/24/07	1260	1790	91.6	53.6	Ref. 13, pp. 1-5, 11, 12-20, 25; Ref. 16, p. 13; Ref. 20, p. 11; 91, p. 1
OEM20-51-06	01/24/07	1260	18200	1460	53.6	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 77, pp. 1-4, 7, 10-17, 20; 91, p. 1

Note:

μg/kg micrograms per kilogram

SQL Sample Quantitation Limit for CLP data.
RL Reporting Limit for non-CLP data.

PCB CONCENTRATIONS IN SOIL 06 TO 12 INCHES

SAMPLE/CLP ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
A717 NO92 12/E1DN7	09/15/05	1254	73	36	49.5	Ref. 25, p. 15; Ref. 26, p. 56; Ref. 27, p. 94;
A717-N083-12/F1RN7	08/15/05	1260	86	36	49.5	Ref. 60, pp. 1-11, 17; Ref. 90, p. 2
A748-N238-12/F1SQ4	08/18/05	1260	1000	110	49.5	Ref. 25, p. 17; Ref. 26, p. 66; Ref. 70, pp. 1-14; Ref. 90, p. 2
A765-N323-12/F1RS3	08/15/05	1260	2100	190	49.5	Ref. 25, p. 20; Ref. 26, p. 55; Ref. 27, p. 95; Ref. 71, pp. 1-14; Ref. 90, p. 2
DRN07-51-12	01/25/07	1260	140000	14400	49.5	Ref. 13, pp. 1-6, 12-20, 22; Ref. 16, p. 18; Ref. 20, p. 7; 91, p. 1
FOR20-52-12	06/19/07	1260	94.2	49.2	49.5	Ref. 8, pp. 1-4, 10, 20-28; Ref. 16, p. 29; Ref. 20, p. 8; 91, p. 1
FOR24-51-12	06/19/07	1260	570	48.6	49.5	Ref. 9, pp. 1-4, 31, 37-45; Ref. 16, p. 30; Ref. 20, p. 8; 91, p. 1
FOR34-51-12	06/20/07	1260	3230	256	49.5	Ref. 14, pp. 1-5, 35, 45-53, 57; Ref. 16, p. 33; Ref. 20, p.9; 91, p. 1
FOR35-51-12	06/20/07	1260	4350	270	49.5	Ref. 14,pp. 1-5, 37, 45-53, 57; Ref. 16, p. 33; Ref. 20, p. 9; 91, p. 1
FOR36-52-12	06/20/07	1260	4170	446	49.5	Ref. 14, pp. 1-5, 39, 45-53, 57; Ref. 16, p. 33; Ref. 20, p. 9; 91, p. 1
FOR37-51-12	06/20/07	1260	264	47.9	49.5	Ref. 14, pp. 1-5, 42, 45-53, 57; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR38-51-12	06/20/07	1260	251	41.5	49.5	Ref. 12, pp. 1-5, 23-31; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR39-51-12	06/20/07	1260	217	44.1	49.5	Ref. 12, pp. 1-4, 6, 23-31; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR41-51-12	06/20/07	1260	3220	221	49.5	Ref. 12, pp. 1-4, 8, 23-31; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR42-51-12	06/20/07	1260	410	49.5	49.5	Ref. 12, pp. 1-4, 9, 23-31; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR44-51-12	06/20/07	1260	101	47.4	49.5	Ref. 12, pp. 1-4, 10, 23-30, 32; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1
FOR46-51-12	06/20/07	1260	271	47.1	49.5	Ref. 12, pp. 1-4, 12, 23-30, 32; Ref. 16, p. 34; Ref. 20, p. 9; 91, p. 1

Note:

micrograms per kilogram

μg/kg SQL Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

SAMPLE/CLP ID	DATE	РСВ	VALUE µg/kg	SQL/RL µg/kg	MAXIMUM BACKGROUND µg/kg	REFERENCES
FOD 40, 51, 12	06/20/07	1254	470	47	49.5	Ref. 12, pp. 1-4, 21, 23-30, 34; Ref. 16, p. 35;
FOR49-51-12	06/20/07	1260	27100	1880	49.5	Ref. 20, p. 9; 91, p. 1
FOD 40, 52, 12	0.6/20/07	1254	746	43.7	49.5	Ref. 12, pp. 1-4, 22-30, 34; Ref. 16, p. 35; Ref.
FOR49-52-12	06/20/07	1260	46100	2620	49.5	20, p. 9; 91, p. 1
FRM08-51-12	06/19/07	1260	1080	47.1	49.5	Ref. 7, pp. 1-4, 9, 21-28, 33; Ref. 16, p. 27; Ref. 20, p.10; 91, p. 1
FRM10-51-12	06/19/07	1260	1200	49.4	49.5	Ref. 7, pp. 1-4, 12, 21-28, 33; Ref. 16, p. 27; Ref. 20, p. 10; 91, p. 1
FRM13-51-12	06/19/07	1260	974	50.5	49.5	Ref. 6, pp. 1-4, 8, 14, 21, 23; Ref. 16, p. 26; Ref. 20, p. 10; 91, p. 1
FRM28-51-12	06/19/07	1260	204	48.6	49.5	Ref. 6, pp. 1-4, 11, 14, 21, 23; Ref. 16, p. 26; Ref. 20, p. 10; 91, p. 1
OEM18-51-12	01/24/07	1260	612	46.4	49.5	Ref. 16, p. 13; Ref. 20, p. 11; Ref. 75, pp. 1-4, 14-21; 91, p. 1

Note:

μg/kg micrograms per kilogram

SQL Sample Quantitation Limit for CLP data. RL Reporting Limit for non-CLP data.

Attribution

The ESCO facility began operations in 1945 and operated until March 1991. ESCO manufactured PCB-containing electrical transformers and high-voltage switchgear for electrical distribution. ESCO also repaired and refurbished used transformers for resale (Ref. 5, p. 3-1 and Ref. 17, p. 6). PCBs were used as coolants and lubricants in transformers and other electrical equipment because they do not burn easily and are good insulators (Ref. 23, p. 1).

In July 1980, the Texas Department of Water Resources (TDWR) conducted a site inspection of the ESCO facility in response to a citizen complaint of transformer oil being disposed of at the site. TDWR personnel collected soil samples from small patches of oily soil near the main building and parking lot area. Chemical analyses of the soil samples indicated high concentrations of PCBs (Ref. 5, p. 3-2).

A transformer area was observed on the east side of the ESCO property in 2004 to 2005. The area contained three transformers situated on a concrete pad with no additional secondary containment present. Each transformer contained approximately three-quarters of its 250-gallon storage capacity. Visible staining was observed on one of the transformers as well as on the underlying concrete pad (Ref. 5, p. 3-4).

The method that the ESCO facility used to fill or refill the used transformers is not known. One possible method of filling or refilling is that the old transformers could have been submerged in vats of PCB oil (Ref. 24, pp. 1-4). The old PCB oil in transformers could have also been allowed to gravity drain onto the floor or ground in order to empty the transformers prior to refilling. To fill or refill the transformer, the PCB oil was likely simply poured into the transformer. In both cases, spills could occur from overfilling or movement of the transformers, and, as is indicated above, staining was observed and oily soil near the main building and parking lot documents high concentrations of PCBs (Ref. 5, p. 3-2 and 3-4). Contamination of soil could have resulted from these direct spills or leaking transformers and subsequent migration off the facility due to surface water and/or storm water runoff, especially to the west and southwest following the topography of the area (Ref. 3, p. 1). Overland flow of surface water and/or storm water runoff into the drainage ditch located southwest of the main building is another suspected avenue for PCB migration off the facility (Figure A2 of Attachment A).

Another suspected method of contamination is spray application for the purposes of dust suppression (Ref. 86, p. 4). Spray application is suspected in the residential areas north and east of the facility since these areas are located upgradient. Another possible method of migration is that contaminated soil from the facility could have been provided to the residents as a soil amendment, but this is unknown (Ref. 83, p. 1).

As a result of ESCO's past operations of large-scale electrical transformer manufacturing, including repairing and refurbishing used transformers, widespread presence of PCBs exceeding the health-based risk level established by EPA has been established at the ESCO facility. Due to ESCO's past operations as an electrical transformer manufacturer and the fact that no other facilities in the area are known to be associated with PCBs, the PCB contamination in the soil can be attributed (wholly or, at least, in part) to the ESCO facility (Ref. 85, pp. 1-9).

5.1.2 Waste Characteristics

Hazardous substances available to the soil exposure pathway include PCBs (Ref. 1, Sec. 5.1.2). A discussion of each separate factor value is presented in the following subsections.

5.1.2.1 Toxicity

Toxicity values for hazardous substances are presented in the following table (Ref. 2, pp. 1-6). The hazardous substance with the highest toxicity factor value will be assigned as the toxicity factor for the Resident Population Threat (Ref. 1, Sec. 5.1.2.1).

SUBSTANCE	TOXICITY FACTOR VALUE	REFERENCES
Polychlorinated biphenyls (PCBs)	10,000	Ref. 1; Ref. 2, p. 6

Toxicity Factor Value: 10,000

5.1.2.2 Hazardous Waste Quantity

The extent of the estimated area of observed contamination has not been adequately determined (Ref. 1, Sec. 5.0.1). Data providing quantities of hazardous substances deposited in Contaminated Soil Area A is not available; therefore, Tier A (Hazardous Constituent Quantity) cannot be adequately determined (Ref. 1, Sec. 2.4.2.1.1 and Sec. 5.1.2.2). Manifests or permits that might describe wastestream, pollutant, and/or contaminant data is not available; therefore, Tier B (Hazardous Wastestream Quantity) cannot be adequately determined (Ref. 1, Sec. 2.4.2.1.2 and Sec. 5.1.2.2). Permits or records that may approximate the volume of Contaminated Soil Area A is not available; therefore, Tier C (Volume) cannot be adequately determined (Ref. 1, Sec. 2.4.2.1.3 and Sec. 5.1.2.2).

Records, permits, or data are not available and additional assessment of the site is on-going. The total estimated area of contamination is greater than 0, but unknown (Ref. 1, Sec. 5.1.2.2, Table 5-2).

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Unknown but > 0 \div 34,000 = > 0
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As such, the Hazardous Waste Quantity Factor Value of 10 has been assigned (Ref. 1, Table 2-6, Sec. 2.4.2.2).

Area of Observed Contamination: > 0 but unknown Source Hazardous Quantity: >0 but unknown Hazardous Waste Quantity Factor Value: 10

5.1.2.3 Calculation of Waste Characteristics Factor Category Value

The waste characteristics factor category is calculated as follows (Ref. 1, Table 2-7, Sec. 2.4.3.1 and Sec. 5.1.2.3):

10,000 (toxicity) x 10 (hazardous waste quantity) = 100,000

Waste Characteristics Factor Value: 18

5.1.3 Targets

A discussion regarding the targets evaluated for the Old ESCO Manufacturing facility is presented in the following sections.

To determine the level of contamination for each sampling location, the concentration of each hazardous substance that meets the observed contamination criteria for that sampling location is compared to the lowest applicable HRS benchmark (Ref. 1, Sec. 2.5.1 and Ref. 2).

HEALTH-BASED BENCHMARKS

SUBSTANCE	REFERENCE DOSE SCREEN CONCENTRATION µg/kg	CANCER RISK SCREEN CONCENTRATION µg/kg	REFERENCES
Polychlorinated biphenyls	1600	320	Ref. 1, Sec. 2.5.1; Ref. 2, p. 7

Soil samples were collected from residential properties located immediately to the north and east of the former ESCO facility. Parcel data of the surrounding residences was reviewed prior to the sampling event to ensure that each sample was collected within 200 feet of the actual residence and on the residential property. The parcel data is provided as Reference 78. The latitude and longitude of each sample location was determined using a hand-held Global Positioning System (GPS) at the time of collection (Ref. 20, pp. 1-12). A 200-foot radius was measured around each residence sampled using a scaled aerial photograph to ensure that the samples met the HRS target criteria (Figure A5 of Attachment A). The Level I and Level II sample locations are depicted on Figure A5 of Attachment A in relation to their respective 200-foot radii.

Sample results for targets eligible for evaluation for the soil exposure pathway are presented in the following tables on pages 49 through 50 of this HRS documentation record. It should be noted that more than one sample has been presented for some of the targets. Sample stations associated with each residence are depicted on Figure A5 of Attachment A. Targets include multiple residences located immediately north and east of the former ESCO facility. Additionally, children were observed in the area during the 2005 sampling events (Ref. 5, p. 6-4) and 2007 sampling events (Ref. 79, p. 1). The areas surrounding the former facility are not fenced and are readily accessible to nearby residents (Ref. 4, p. 1 and Ref. 5, p. 6-4).

LEVEL I AND LEVEL II TARGETS

SAMPLE ID/CLP ID	VALUE µg/kg	LEVEL I or II?	REFERENCES
A302-N11-01	585	I	Ref. 25, p. 8; Ref. 26, p. 4; Ref. 27, p. 12; Ref. 37, pp. 1-22, 27
A403-N11-01/F1EM4	570	I	Ref. 25, p. 9; Ref. 26, p. 24; Ref. 40, pp. 1-20
A414-D07-01/F1EN0	600	I	Ref. 26, p. 23; Ref. 27, pp. 53, 60; Ref. 40, pp. 1-19, 21
A428-N07-01/F1LC9	320	I	Ref. 25, p. 11; Ref. 26, p. 42; Ref. 27, pp. 75, 88; Ref. 35, pp. 1-16, 19
A436-N28-01/F1LE8	550	I	Ref. 25, p. 11; Ref. 26, p. 46; Ref. 27, pp. 77, 89; Ref. 46, pp. 1-21
A442-N46-01/F1LN1	430	I	Ref. 10, pp. 1-16; Ref. 25, p. 11; Ref. 26, p. 51; Ref. 27, p. 77
A748-N238-12/F1SQ4	1000	I	Ref. 20, p. 5; Ref. 26, p. 66; Ref. 70, pp. 1-10
1001-51-06	2830	I	Ref. 15, pp. 1-5, 16-23, 27; Ref. 16, p. 22; Ref. 20, p. 2
1002-51-00	229	II	Ref. 15, pp. 1-4, 6, 16-23, 30; Ref. 16, p. 22; Ref. 20, p. 2
1009-51-06	59.1	II	Ref. 6, pp. 1-5, 14-21, 27; Ref. 16, p. 24; Ref. 20, p. 2
FRM01-51-06	347	I	Ref. 8, pp. 1-4, 15, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9
FRM03-51-06	752	I	Ref. 8, pp. 1-4, 17, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9
FRM04-51-06	3010	I	Ref. 8, pp. 104, 18, 20-27, 29; Ref. 16, p. 28; Ref. 20, p. 9
FRM05-51-06	1440	I	Ref. 7, pp. 1-4, 6, 21-28, 33; Ref. 16, p. 28; Ref. 20, p. 9
FRM06-51-06	548	I	Ref. 7, pp. 1-4, 7, 21-28, 33; Ref. 16, p. 28; Ref. 20, p. 10
FRM07-51-06	834	I	Ref. 7, pp. 1-4, 8, 21-28, 33; Ref. 16, p. 27; Ref. 20, p. 10
FRM08-51-12	1080	I	Ref. 7, pp. 1-4, 9, 21-28, 33; Ref. 16, p. 27; Ref. 20, p. 10
FRM09-51-06	1380	I	Ref. 7, pp. 1-4, 10, 21-28, 31; Ref. 16, p. 27; Ref. 20, p. 10
FRM10-51-12	1200	I	Ref. 7, pp. 1-4, 12, 21-28, 33; Ref. 16, p. 27; Ref. 20, p. 10
FRM11-51-06	912	I	Ref. 7, pp. 1-4, 13, 21-28, 31; Ref. 16, p. 27; Ref. 20, p. 10
FRM12-51-06	5080	I	Ref. 7, pp. 1-4, 14, 21-28, 31; Ref. 16, p. 26; Ref. 20, p. 10
FRM13-51-12	974	I	Ref. 6, pp. 1-4, 8, 14-21, 23; Ref. 16, p. 26; Ref. 20, p. 10
FRM21-51-06	576	I	Ref. 7, pp. 1-4, 15, 21-28, 31; Ref. 16, p. 27; Ref. 20, p. 10
FRM22-51-06	969	I	Ref. 7, pp. 1-4, 16, 21-28, 29; Ref. 16, p. 27; Ref. 20, p. 10
FRM23-51-06	269	II	Ref. 7, pp. 1-4, 17, 21-29; Ref. 16, p. 27; Ref. 20, p. 10

LEVEL I AND LEVEL II TARGETS (Continued)

SAMPLE ID	VALUE µg/kg	LEVEL I or II?	REFERENCES
FRM24-51-06	138	II	Ref. 7, pp. 1-4, 18, 21-29; Ref. 16, p. 27; Ref. 20, p. 10
FRM25-51-06	58.7	II	Ref. 7, pp. 1-4, 19, 21-28, 30; Ref. 16, p. 27; Ref. 20, p. 10
FOR15-51-06	77.6	II	Ref. 8, pp. 1-5, 20-28; Ref. 16, p. 29; Ref. 20, p. 8
FOR16-51-06	254	II	Ref. 8, pp. 1-4, 6, 20-28; Ref. 16, p. 29; Ref. 20, p. 8
FOR17-51-06	242	II	Ref. 8, pp. 1-4, 7, 20-28; Ref. 16, p. 29; Ref. 20, p. 8
FOR18-51-06	175	II	Ref. 8, pp. 1-4, 8, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 8
FOR19-51-06	194	II	Ref. 8, pp. 1-4, 9, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 8
FOR21-51-06	248	II	Ref. 9, pp. 1-4, 30, 37-45; Ref. 16, p. 29; Ref. 20, p. 8
FOR22-51-06	65.9	II	Ref. 8, pp. 1-4, 11, 20-27, 30; Ref. 16, p. 29; Ref. 20, p. 8
FOR25-51-06	933	I	Ref. 8, pp. 1-4, 13, 20-27, 30; Ref. 16, p. 30; Ref. 20, p. 8

Note:

μg/kg micrograms per kilogram

5.1.3.1 Resident Individual

Level I concentrations and Level II concentrations were determined by comparing the characterization sample results to the cancer risk screening concentration (presented on page 48) (Ref. 1, Sec. 5.1.3.2, Table 5-3; Ref. 2, p. 7).

Chemical analysis of soil samples collected from residential properties located immediately north and east of the former ESCO facility indicate the presence of Level I concentrations in multiple residential yards (Refer to analytical tables presented on page 49 through 50 of this documentation record). Additionally, the soil samples were collected within 200 feet of the area of observed contamination (Figure A5 of Attachment A). As such, a value of 50 will be assigned as the Resident Individual Factor Value (Ref. 1, Sec. 5.1.3.1).

Resident Individual Factor Value: 50

5.1.3.2 Resident Population

5.1.3.2.1 Level I Concentrations

Level I concentrations of PCBs have been documented in samples collected from 20 different residences

(Ref. 1, Sec. 2.5.1 and Sec. 5.1.3.2; Figure A5 of Attachment A). It should be noted that, in some cases, more than one sample has been collected from a residence. Sample stations associated with each residence are depicted on Figure A5 of Attachment A. The average number of persons per household for Hunt County is 2.6 persons based on the 2000 Census Bureau data (Ref. 80, p. 1). The average persons per household was multiplied by 20 to determine the total number of resident individuals subject to Level I concentrations (Ref. 78, pp. 1-3 and 7-11; Ref. 79, p. 1; and Ref. 80, pp. 1-3).

Further, specific household counts were taken at two residences. Four (4) persons in one residence and 3 persons in another residence were documented for two separate residences by START-3 personnel during an April 2007 visit (Ref. 79, p. 1). Although there are no documented schools or daycare centers nearby, START-2 observed children playing in the area as well as children's playground equipment and toys in the yards of several residences (Ref. 5, p. 6-4 and Ref. 79, p. 1). The number of persons subject to Level I concentrations is multiplied by 10 (Ref. 1, Sec. 5.1.3.2.1).

```
1 residence x 3 persons per household = 3 persons (station A7-48)
1 residence x 4 persons per household = 4 persons (station 1001)
20 residences x 2.6 average persons per household = 52 persons
59 persons x 10 = 590
```

Level I Concentration Factor Value: 590

5.1.3.2.2 Level II Concentrations

Level II concentrations of PCBs have been documented in samples collected from 13 different residences, and each of the 13 samples were collected within 200 feet of the residence Figure A5 of Attachment A and Ref. 78, pp. 1, 5, 12, 14-19). Further, it was determined that 4 persons resided at one of the residences based on conversations with local residents during an April 2007 site visit (Ref. 79, p. 1). The average number of persons per household information from the 2000 Census Bureau data was used since specific household counts had not been performed for the remaining 12 residences (Ref. 80, p. 1). The average number of persons per household for Hunt County was multiplied by 12 to determine the number of resident individuals for 12 of the houses (Ref. 80, p. 1). Four resident individuals were added to this subtotal to determine the total number of resident individuals subject to Level II concentrations.

The total number of persons subject to Level II concentrations is assigned as the factor value (Ref. 1, Sec. 5.1.3.2.2).

```
1 residence x 4 persons per household = 4 persons (Station 1002)
12 residences x 2.6 average persons per household = 31.2
35.20 persons x 1 = 35.20
```

Level II Concentration Factor Value: 35.20

5.1.3.2.3 Calculation of Resident Population Factor Value

Sum the factor values for Level I concentrations and Level II concentrations. This sum is assigned as the Resident Population Factor Value (Ref. 1, Sec. 5.1.3.2.3).

Resident Population Factor Value: 625.20

5.1.3.3 Workers

There is a residence located on the northwest corner of Forrester Street and FM118 within the estimated area of observed contamination, as depicted on Figure A3 of Attachment A. Based on the aerial photograph of the area and observations made during field investigation in 2007, it appears that this residence is being utilized as used car business (Ref. 4, p. 1; Ref. 78, pp. 1, 13; Ref. 89, p. 1). Soil sample FRM01-51-06 was collected within 200 feet of the residence and PCB contamination was detected at a concentration of 347 μ g/kg, which exceeds the benchmark of 320 μ g/kg. The exact number of workers present has not been documented; however, it can reasonably be assumed that there would be at least one worker at the auto repair business.

As such, the worker factor value will be assigned a value of 5 based on the likelihood that more than 1 but less than 100 workers are employed at the auto repair business (Ref. 1, Table 5-4, Sec. 5.1.3.3).

Workers Factor Value: 5

5.1.3.4 Resources

There are no known HRS eligible resources present within the area of observed contamination (Ref. 1, Sec. 5.1.3.4). As such, a value of 0 will be assigned.

Resources Factor Value: 0

5.1.3.5 Terrestrial Sensitive Environments

The Texas Parks and Wildlife Department (TPWD) Natural Diversity Database was utilized to research the possibility of federally and state-designated endangered or threatened species that potentially exist at the ESCO facility and within the Sabine River watershed down gradient of the site. The TPWD database search results reported that there are several federally and state-designated endangered and threatened species located in Hunt County (Ref. 81, pp. 1-9). Several bird species have been identified in Hunt County as either migrant or local species: the Bald Eagle (*Haliaeetus leucocephalus*), Henslow's Sparrow (*Ammodramus henslowii*), the migrant Loggerhead Shrike (*Lanius ludovicianus migrans*), the White-faced Ibis (*Plegadis chihi*), and the Wood Stork (*Mycteria Americana*) (Ref. 5, p. 6-6 and Ref. 81, p. 5).

If a terrestrial sensitive environment is located on an area of observed contamination, values from Table 5-5 of the HRS Rule are assigned to each sensitive environment that meets the eligibility criteria (Ref. 1, Sec. 5.1.3.5). No federally or state-designated endangered or threatened species have been identified at the site by representatives of the U.S. Fish and Wildlife Service or THP; there is only the potential for their presence at the site (Ref. 5, p. 6-6). There are no known eligible terrestrial sensitive

environments identified on or within 200 feet of observed contamination.

Terrestrial Sensitive Environments Factor Value: 0

5.1.3.6 Calculation of Resident Population Targets Factor Category Value

The Resident Population Targets Factor Category Value is assigned as follows (Ref. 1, Sec. 5.1.3.6):

50 (Resident Individual) + 625.20 (Resident Population) + 5 (Workers)

Targets Factor Category Value: 680.20

5.1.4 Calculation or Resident Population Threat Score

The Resident Population Threat Score is calculated as follows (Ref. 1, Sec. 5.1.4):

550 (Likelihood of Exposure) x 18 (Waste Characteristics) x 680.20 (Resident Population)

Resident Population Threat Score: 6,733,980.00

5.2 NEARBY POPULATION THREAT

The site is not fenced and has no security to limit public access; however, the main building is kept locked and its windows barred. Contamination is present in surface soils located on and off the facility property at depths of 12 inches below ground surface or less, thus making the contaminated soils readily accessible. Based on a house count using the 7.5-minute topographic series map of Northeast Greenville, there are between 15 and 20 houses located within a 1 mile radius of the area of concern (not including the houses previously counted as Level I or Level II points of observed contamination (Ref. 3, p. 1). The nearby population threat was not scored because it is not expected to contribute significantly to the pathway score or the overall site score (Ref. 1, Sec. 5.2).

5.3 CALCULATION OF SOIL EXPOSURE PATHWAY SCORE

The Soil Exposure Pathway Score is calculated as follows (Ref. 1, Sec. 5.3):

Score = 6,733,980 + 0 = 6,733,980

= 6,733,980/82,500

= 81.624 (subject to a maximum of 100)

Soil Exposure Pathway Score: 81.62

6.0 <u>AIR MIGRATION PATHWAY</u> - NOT SCORED

The air migration pathway will not be scored because it is not expected to contribute significantly to the site score. Further, the site score exceeds 28.50 based only on the evaluation of the soil exposure pathway.

Attachment A









